DS-8100HFI-ST Series DVR

USER MANUAL

Version 2.0.2

Hikvision® Network Digital Video Recorder User's Manual

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Regulatory Information

FCC Information

FCC compliance: This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC.

2002/96/EC (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

Description on Laser Specification

The optical disc drive such as DVD Super Multi (Double Layer) Drive 22X that is used in this computer is equipped with laser. The classification label with the following sentence is affixed to the surface of the drive.

CLASS 1 LASER
PRODUCT TO IEC60825-1
LASER KLASSE 1

The drive with the above label is certified by the manufacturer that the drive complies with the requirement for laser product on the date of manufacturing pursuant to article 21 of Code of Federal Regulations by the United States of America, Department of Health & Human Services, Food and Drug Administration.
In other countries, the drive is certified to comply with the requirement pursuant to IEC 60825-1 and EN 60825-1 on class 1 laser product.
This computer is equipped with the optical disc drive in the following list according to the model.

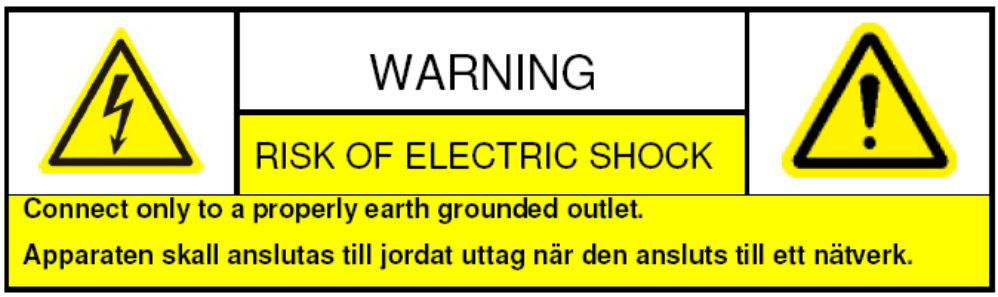
Safety Warnings and Cautions

Please pay attention to the following warnings and cautions:

Hazardous Voltage may be present: Special measures and precautions must be taken when using this device. Some potentials (voltages) on the device may present a hazard to the user. This device should only be used by the Employees from our company with knowledge and training in working with these types of devices that contain live circuits.

Caution
The power supply in this product contains no user-serviceable parts. Refer servicing only to qualified personel.

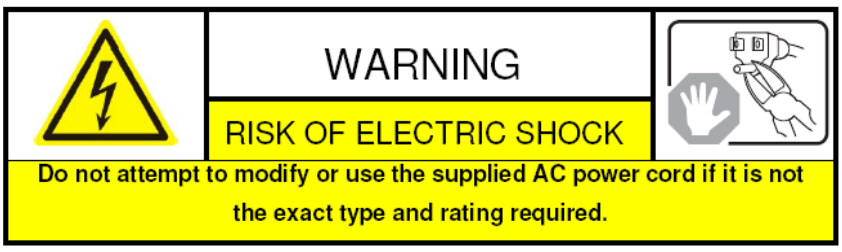
Power Supply Hazardous Voltage: AC mains voltages are present within the power supply assembly. This device must be connected to a UL approved, completely enclosed power supply, of the proper rated voltage and current. **No user serviceable parts inside the power supply.**


WARNING
RISK OF ELECTRIC SHOCK
Connect only to a properly earth grounded outlet.
Apparaten skall anslutas till jordat uttag när den ansluts till ett nätverk.

System Grounding (Earthing): To avoid shock, ensure that all AC wiring is not exposed and that the earth grounding is maintained. Ensure that any equipment to which this device will be attached is also connected to properly wired grounded receptacles and are approved medical devices.

Power Connect and Disconnect: The AC power supply cord is the main disconnect device to mains (AC power).The socket outlet shall be installed near the equipment and shall be readily accessible.

Installation and Maintenance: Do not connect/disconnect any cables to or perform installation/maintenance on this device during an electrical storm.


WARNING
RISK OF ELECTRIC SHOCK
Do not attempt to modify or use the supplied AC power cord if it is not the exact type and rating required.

Power Cord Requirements: The connector that plugs into the wall outlet must be a grounding-type male plug designed for use in your region. It must have certification marks showing certification by an agency in your region. The connector that plugs into the AC receptacle on the power supply must be an IEC 320, sheet C13, female connector. See the following website for more information http://kropla.com/electric2.htm.

Lithium Battery: This device contains a Lithium Battery. There is a risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the vendor's instructions and in accordance with local environmental regulations.

Perchlorate Material: Special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate. This notice is required by California Code of Regulations, Title 22, Division 4.5, Chapter 33: Best Management Practices for Perchlorate Materials. This device includes a battery which contains perchlorate material.

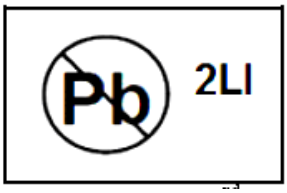
Taiwan battery recycling:

Please recycle batteries.

Thermal and Mechanical Injury: Some components such as heat sinks, power regulators, and processors may be hot; care should be taken to avoid contact with these components.

Electro Magnetic Interference: This equipment has not been tested for compliance with emissions limits of FCC and similar international regulations. This device is not, and may not be, offered for sale or lease, or sold, or leased until authorization from the United States FCC or its equivalent in other countries has been obtained. Use of this equipment in a residential location is prohibited. This equipment generates, uses and can radiate radio frequency energy which may result in harmful interference to radio communications. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is required to take measures to eliminate the interference or discontinue the use of this equipment.

Lead Content:



Please recycle this device in a responsible manner. Refer to local environmental regulations for proper recycling; do not dispose of device in unsorted municipal waste.

Preventive and Cautionary Tips

Before connecting and operating your DVR, please be advised of the following tips:

- Ensure unit is installed in a well-ventilated, dust-free environment.
- Unit is designed for indoor use only.
- Keep all liquids away from the DVR.
- Ensure environmental conditions meet factory specifications.
- Ensure unit is properly secured to a rack or shelf. Major shocks or jolts to the unit as a result of dropping it may cause damage to the sensitive electronics within the unit.
- Use the DVR in conjunction with an UPS if possible.
- Power down the unit before connecting and disconnecting accessories and peripherals.
- A factory recommended HDD should be used for this device.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

Product Key Features

Compression

- PAL/NTSC adaptive video inputs.
- H.264 video compression with high reliability and superior definition.
- Each channel supports dual-stream. Main stream supports up to 4CIF resolution and sub stream supports up to CIF resolution.
- Independent configuration for each channel, including resolution, frame rate, bit rate, image quality, etc.
- The quality of the imported and exported record is configurable.
- Each channel supports two kinds of compression parameters, the normal continuous and event, which can be configured locally. .
- Encoding for both audio/video composite stream and video stream; audio and video synchronization during composite stream encoding.
- Watermark technology.

Local Monitoring

- Simultaneous HDMI, VGA and CVBS outputs; simultaneous live view and playback via VGA and HDMI outputs.
- HDMI output and VGA output at up to 1920×1080P resolution.
- 1/4/6/8/9/16-division live view is supported, and the display sequence of screens is adjustable.
- Live view screen can be switched in group, and manual switch and automatic cycle review is also provided, the interval of automatic cycle can be adjusted.
- Quick setting menu is provided for live view.
- The selected live view channel can be shielded.
- Motion detection, tamper-proof, video exception alert and video loss alert functions.
- Privacy mask.
- Several PTZ protocols supported; PTZ preset, patrol and pattern.
- Zooming in by clicking the mouse and PTZ tracing by dragging mouse.

HDD Management

- Up to 8 SATA hard disks, 8 network disks (8 NAS disks, or 7 NAS disks+1 IP SAN disk) and 1 eSATA disk can be connected, each disk with a maximum of 4TB storage capacity.
- Support eSATA disk for recording or backup.
- HDD group management.
- Support HDD standby function.
- HDD property: redundancy, read-only, read/write (R/W).
- HDD quota management; different capacity can be assigned to different channel.

Recording, Capture and Playback

- Holiday recording schedule configuration.
- Cycle and non-cycle recording mode.
- Normal and event video encoding parameters.
- Multiple recording types: manual, normal, alarm, motion, motion | alarm, motion & alarm.
- 8 recording time periods with separated recording types.
- Pre-record and post-record for alarm, motion detection for recording, and pre-record time for schedule and manual recording.
- Searching record files and captured pictures by events (alarm input/motion detection).

- Customization of tags, searching and playing back by tags.
- Locking and unlocking record files.
- Local redundant recording and capture.
- Searching and playing back record files by channel number, recording type, start time, end time, etc.
- Motion analysis for the selected area in the video.
- Zooming in when playback.
- Playing reversely.
- Supports pause, rewind, play fast, play slow, skip forward, and skip backward when playback, locating by dragging the mouse.
- Up to 16-ch synchronous playback at 4CIF real time.
- Manual capture, continuous capture of video images and playback of captured pictures.

Backup

- Export video data by USB, SATA or eSATA disk.
- Export video clips when playback.
- Management and maintenance of backup devices.

Alarm and Exception

- Configurable arming time of alarm input/output.
- Alarm for video loss, motion detection, tampering, abnormal signal, video input/output standard mismatch, illegal login, network disconnected, IP confliction, abnormal record/capture, HDD error, and HDD full, etc.
- Alarm triggers full screen monitoring, audio alarm, notifying surveillance center, sending email and alarm output.
- Automatic restore when system is abnormal.

Other Local Functions

- Users can operate by front panel, mouse, remote control, and control keyboard.
- Three-level user management; admin user is allowed to create many operating accounts and define their operating permission, which includes the limit to access any channel.
- Operation, alarm, exceptions and log recording and searching.
- Manually triggering and clearing alarms.
- Import and export of device configuration information.

Network Functions

- 1 self-adaptive 10M/100M/1000M network interface.
- IPv6 is supported.
- TCP/IP protocol, PPPoE, DHCP, DNS, DDNS, NTP, SADP, SMTP, SNMP, NFS, and iSCSI are supported.
- TCP, UDP and RTP for unicast.
- Remote search, playback, download, locking and unlocking the record files, and downloading files broken transfer resume.
- Remote parameters setup; remote import/export of device parameters.
- Remote viewing of the device status, system logs and alarm status.
- Remote keyboard operation.
- Remote locking and unlocking of control panel and mouse.
- Remote HDD formatting and program upgrading.
- Remote system restart and shutdown.

- RS-232, RS-485 transparent channel transmission.
- Alarm and exception information can be sent to the remote host
- Remotely start/stop recording.
- Remotely start/stop alarm output.
- Captured pictures can be sent to the FTP and the FTP can be upgraded remotely.
- Remote PTZ control.
- Remote JPEG capture.
- Two-way voice talk and voice broadcasting.
- Embedded WEB server.

Development Scalability:

- SDK for Windows and Linux system.
- Source code of application software for demo.
- Development support and training for application system.

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C H A P T E R 1

Introduction

1.1 Front Panel

The front panel of DS-8100HFI-ST is shown in Figure 1.1.

Figure 1.1 Front Panel

Table 1.1 Description of Control Panel Buttons

No.	Name	Function Description
1	**POWER ON/OFF**	Power on/off switch.
2	**USB**	Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).
3	**DVD-ROM**	Slot for DVD-ROM. (Optional)
4	**Alphanumeric Buttons**	• Switching to the corresponding channel in Live view or PTZ Control mode. • Inputting numbers and characters in Edit mode. • Switching between different channels in Playback mode. •The light of the button is green when the corresponding channel is recording; it is red when the channel is in network transmission status; it is pink when the channel is recording and transmitting.
5	**DIRECTION/ENTER**	The DIRECTION buttons are used to navigate between different fields and items in menus. In Playback mode, the Up and Down button is used to speed up and slow down recorded video. The Left and Right button will select the next and previous day of recordings. In Preview mode, these buttons can be used to cycle through channels.
	ENTER	The ENTER button is used to confirm selection in any of the menu modes. It can also be used to *tick* checkbox fields. In Playback mode, it can be used to play or pause the video. In single-screen play mode, pressing the ENTER button will advance the video by a single frame.
	ESC	Back to the previous menu Pressing for arming/disarming the DVR in Live View mode.
	REC/SHOT	Entering the Manual Record setting menu. In PTZ control settings, press the REC/SHOT button and then you can call a PTZ preset by pressing Numeric button.
	PLAY/AUTO	The PLAY/AUTO button is used to enter the Playback menu. It is also used to turn audio on/off in the Playback menu and auto scan in the PTZ Control menu.
	ZOOM+	Zooming in the PTZ camera in the PTZ Control setting.
	A/FOCUS+	Adjusting focus in the PTZ Control menu. It is also used to switch between input methods (upper and lowercase alphabet, symbols and numeric input). It can also be used to clear entire masked areas, such as in

6		the Motion Detection and Privacy Mask menus.
	EDIT/IRIS+	The EDIT/IRIS+ button is used to edit text fields. When editing text fields, it will also function as a Backspace button to delete the character in front of the cursor. On checkbox fields, pressing the EDIT/IRIS+ button will *tick* the checkbox. In PTZ Control mode, the EDIT/IRIS+ button opens up the iris of the camera. In Playback mode, it can be used to generate video clips for backup.
	MAIN/SPOT/ZOOM-	The MAIN/SPOT/ZOOM- button is used to switch between main and spot output. In PTZ Control mode, it can be used to zoom out the image.
	F1/ LIGHT	The F1/LIGHT button when used in a list field will select all items on the list. In PTZ Control mode, it will turn on/off PTZ light.
	F2/ AUX	The F2/AUX button is used to cycle through tab pages.
	MENU/WIPER	Pressing the MENU/WIPER button will return the user to the Main menu (after successful login). Pressing and holding the button for 5 seconds will turn off audible key beep. The MENU/WIPER button will also bring up Sensitivity Interface settings. In PTZ Control mode, the MENU/WIPER button will start wiper (if applicable).
	PREV/FOCUS-	The PREV/FOCUS- button is used to switch between single screen and multi-screen mode. In PTZ Control mode, it is used to adjust the focus in conjunction with the A/FOCUS+ button. It can also be used to select entire masked areas, such as in Motion Detection and Privacy Mask menus.
	PTZ l/IRIS	The PTZ/IRIS- button is used to enter the PTZ Control mode. When in the PTZ Control mode, it is used to close the iris of the PTZ camera.
7	**IR Receiver**	Receiver for IR remote
8	**JOG SHUTTLE Control**	The JOG SHUTTLE control can be used to move the active selection in a menu. It will move the selection up and down. In the Playback mode, the ring is used to jump 30s forward/backward in video files. In Live View mode, it can be used to cycle through different channels.
9	**ALARM**	Alarm indicator turns red when a sensor alarm is detected.
	READY	Ready indicator is normally green, indicating that the DVR is functioning properly.
	STATUS	Status indicator turns green when DVR is controlled by an IR remote. Indicator turns red when controlled by a keyboard and purple when IR remote and keyboard is used at the same time.
	HDD	HDD indicator blinks red when data is being read from or written to HDD.
	MODEM	Reserved for future usage.
	TX/RX	TX/RX indictor blinks green when network connection is functioning properly.
	GUARD	Guard indicator turns green when the device is in armed status; at this time, an alarm is enabled when an event is detected. The indicator turnsoff when the device is unarmed. The arm/disarm status can be changed by pressing and holding on the ESC button for more than 3 seconds in live view mode.

Note: If GUARD indicator is green (default), all alarm event and exception settings are valid. Otherwise, alarm

event and exception settings will be invalid, but normal recording will still be available.

Note: It is important to note that you must click the EDIT button on either the remote or front panel on a text field before you're able to edit its content. After you're done entering text, you must hit the ENTER button to be able to move on to the next field.

1.2 IR Remote Control Operations

The DVR may also be controlled with the included IR remote control, shown in Figure 1.2.

Note: Batteries (2×AAA) must be installed before operation.

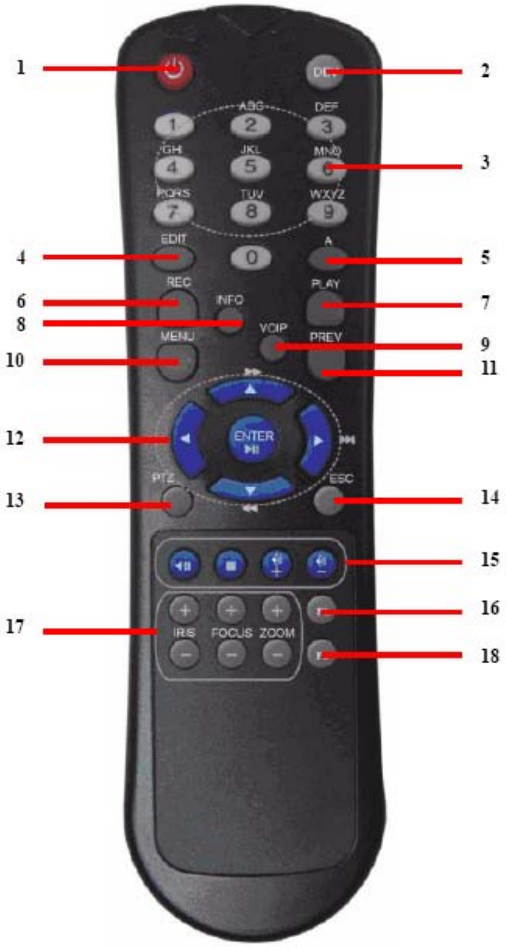

Figure 1.2 Remote Control

The keys on the remote control closely resemble the ones found on the front panel. Referring to Figure 1.2, they include:

Table 1.2 Description of the IR Remote Control Buttons

No.	Name	Description
1	**POWER**	Power on/off the device.
2	**DEV**	Enables/Disables Remote Control.
3	**Alphanumeric Buttons:**	Same as Alphanumeric buttons on front panel.
4	**EDIT Button**	Same as EDIT/IRIS+ button on front panel.
5	**A Button**	Same as A/FOCUS+ button on front panel.
6	**REC Button**	Same as REC/SHOT button on front panel.
7	**PLAY Button**	Same as the PLAY/AUTO button on front panel.
8	**INFO Button**	Same as the ZOOM+ button on front panel.
9	**VOIP Button**	Same as the MAIN/SPOT/ZOOM- button on front panel.

10	**MENU Button**	Same as the MENU/WIPER button on front panel.
11	**PREV Button**	Same as the PREV/FOCUS- button on front panel.
12	**DIRECTION/ENTER Buttons**	Same as the DIRECTION/ENTER buttons on front panel.
13	**PTZ Button**	Same as the PTZ/IRIS- button on front panel.
14	**ESC Button**	Same as the ESC button on front panel.
15	**RESERVED**	Reserved for future usage.
16	**F1 Button**	Same as the F1/LIGHT button on front panel.
17	**PTZ Control Buttons**	Buttons to adjust the iris, focus and zoom of a PTZ camera.
18	**F2 Button**	Same as the F2/AUX button on front panel.

Troubleshooting Remote Control:

Note: Make sure you have install batteries properly in the remote control. And you have to aim the remote control at the IR receiver in the front panel.

If there is no response after you press any button on the remote, follow the procedure below to troubleshoot.

Steps:

1. Go into Menu > Settings > General > More Settings by operating the front control panel or the mouse.
2. Check and remember DVR ID#. The default ID# is 255. This ID# is valid for all IR remote controls.
3. Press the DEV button on the remote control.
4. Enter the DVR ID# from step 2.
5. Press the ENTER button on the remote.

If the Status indicator on the front panel turns green, the remote control is operating properly. If the Status indicator does not turn green and there is still no response from the remote, please check the following:

1. Batteries are installed correctly and the polarities of the batteries are not reversed.
2. Batteries are fresh and not out of charge.
3. IR receiver is not obstructed.

If the remote still can’t function properly, please change the remote and try again, or contact the device provider.

1.3 USB Mouse Operation

A regular 3-button (Left/Right/Scroll-wheel) USB mouse can also be used with this DVR. To use a USB mouse:

1. Plug USB mouse into one of the USB interfaces on the front panel of the DVR.
2. The mouse should automatically be detected. If in a rare case that the mouse is not detected, the possible reason may be that the two devices are not compatible, please refer to the recommended the device list from your provider.

The operation of the mouse:

Table 1.3 Description of the Mouse Control

Name	Action	Description
Left-Click	Single-Click	Live view: Select channel and show the quick set menu. Menu: Select and enter.
	Double-Click	Live view: Switch between single-screen and multi-screen.
	Click and Drag	PTZ control: Wheeling. Tamper-proof, privacy mask and motion detection: Select target area. Digital zoom-in: Drag and select target area. Live view: Drag channel/time bar.
Right-Click	Single-Click	Live view: Show menu. Menu: Exit current menu to upper level menu.
Scroll-Wheel	Scrolling up	Live view: Previous screen. Menu: Previous item.
	Scrolling down	Live view: Next screen. Menu: Next item.

1.4 Input Method Description

Figure 1.3 Soft Keyboard

Description of the buttons on the soft keyboard:

Table 1.4 Description of the Soft Keyboard Icons

Icons	Description	Icons	Description
En	English	A	Capital English
123	Numbers	!#1	Symbols
a	Lowercase/Uppercase		Backspace
	Space	Enter	Enter
ESC	Exit		

1.5 Rear Panel

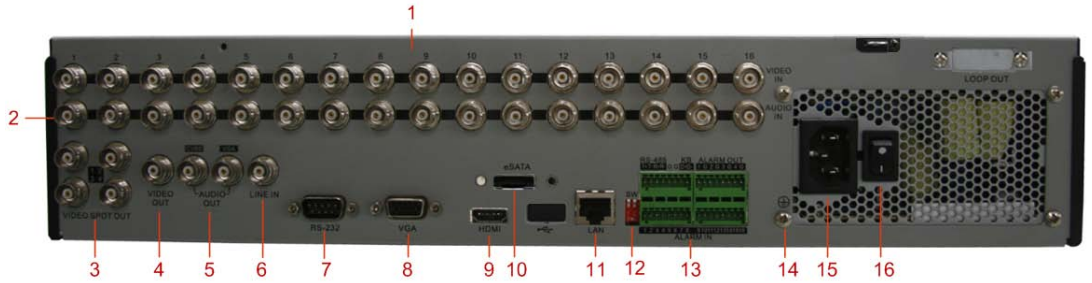

Table 1.5 Description of DS-8100HFI-ST Rear Panel

No.	Item	Description
1	**VIDEO IN**	BNC connector for analog video input.
2	**AUDIO IN**	BNC connector for audio input.
3	**VIDEO SPOT OUT**	BNC connector for video output.
4	**VIDEO OUT**	BNC connector for video output. 1. When both HDMI and VGA are connected, it is used for live view only; 2. When either HDMI or VGA is connected, it is used as the spot video output for live view, playback, recording and PTZ controls; 3. When neither HDMI nor VGA is connected, it is used as the main video output for live view and menu operations.
5	**AUDIO OUT**	BNC connector for audio output. This connector is synchronized with VIDEO OUT.
6	**LINE IN**	BNC connector for audio input.
7	**RS-232 Interface**	Connector for RS-232 devices.
8	**VGA**	DB9 connector for VGA output. Display local video output and menu.
9	**HDMI**	HDMI video output connector.
10	**eSATA (Optional)**	Connects external SATA HDD, CD/DVD-RM.
11	**LAN Interface**	Connector for LAN (Local Area Network).
12	**Termination Switch**	RS-485 termination switch. Up position is not terminated. Down is terminated with 120Ω resistance.
13	**RS-485 Interface**	Connector for RS-485 devices. T+ and T- pins connect to R+ and R- pins of PTZ receiver respectively.
	Controller Port	D+, D- pin connects to Ta, Tb pin of controller. For cascading devices, the first DVR's D+, D- pin should be connected with the D+, D- pin of the next DVR.
	ALARM IN	Connector for alarm input.
	ALARM OUT	Connector for alarm output.
14	**GROUND**	Ground (needs to be connected when DVR starts up).
15	**AC 100V ~ 240V**	AC 100V ~ 240V power supply.
16	**POWER**	Switch for turning on/off the device.

1.6 Starting Up and Shutting Down the DVR

Purpose:

Proper startup and shutdown procedures are crucial to expanding the life of the DVR.

Before you start:

Check that the voltage of the extra power supply is the same with the DVR's requirement, and the ground connection is working properly.

Starting up the DVR:

Steps:

1. Check the power supply is plugged into an electrical outlet. It is HIGHLY recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device. The Power indicator LED on the front panel should be red, indicating the device gets the power supply.
2. Press the POWER button on the front panel. The Power indicator LED should turn green indicating that the unit begins to start up.
3. After startup, the Power indicator LED remains green. A splash screen with the status of the DSP and HDD appears on the monitor. The first row of icons at the bottom of the screen shows the DSP status. If an 'X' is shown on the top of an icon, it means that the DSP initialization has failed. The second row of icons at the bottom of the screen will show the HDD status. If an 'X' is shown, it means that the HDD is not installed or cannot be detected.

Shutting down the DVR

Steps:

There are two proper ways to shut down the DVR. To shut down the DVR:

• OPTION 1: Standard shutdown

1. Enter the Shutdown menu.

   Menu > Shutdown

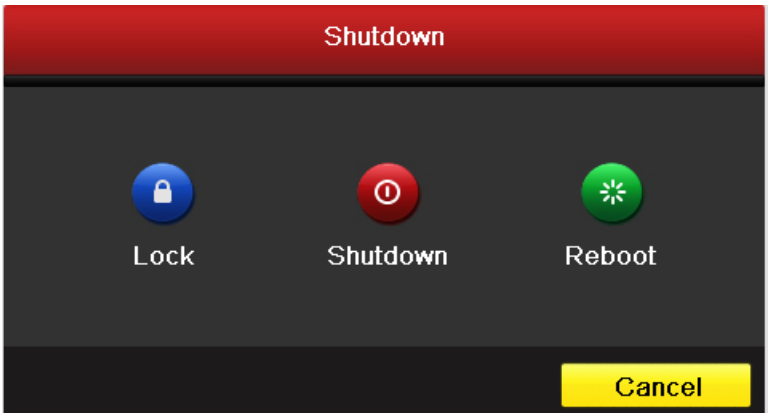

Figure 1.4 Shutdown Menu

2. Select the **Shutdown** button.
3. Click the **Yes** button.

• OPTION 2: By operating the front panel

1. Press and hold the POWER button on the front panel for 3 seconds.
2. Enter the administrator's username and password in the dialog box for authentication.
3. Click the **Yes** button.

Note: Do not press the POWER button again when the system is shutting down.

Rebooting the DVR

While in the Shutdown menu (Figure 4), you can also reboot the DVR.

Steps:

1. Enter the **Shutdown** menu by clicking Menu > Shutdown.
2. Click the **Lock** button to lock the DVR or the **Reboot** button to reboot the DVR.

C H A P T E R 2

Getting Started

By default, the Setup Wizard will start once the DVR has loaded, as shown in Figure 2.1.

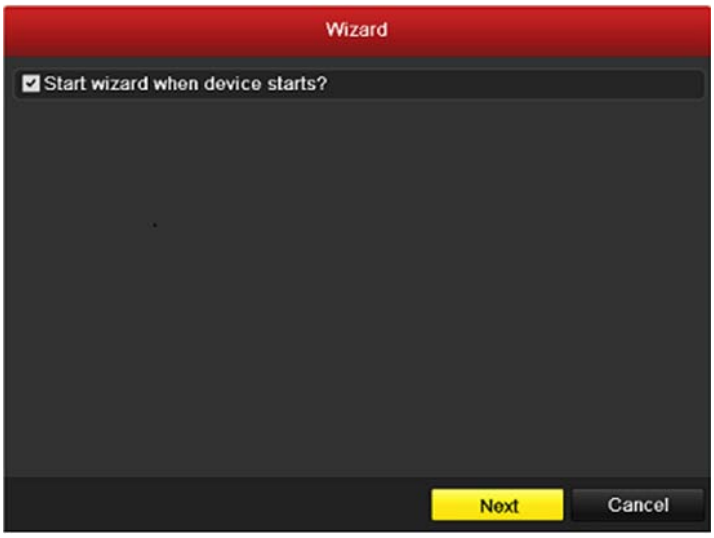

Figure 2.1 Start Wizard Interface

Operating the Setup Wizard:

1. The Setup Wizard can walk you through some important settings of the DVR. If you don't want to use the Setup Wizard at this time, click the **Cancel** button. You can also choose to use the Setup Wizard next time by leaving the "Start wizard when DVR starts?" checkbox in checked status.
2. Click **Next** button on the Wizard window to enter the **Login** window, as shown in Figure 2.2.

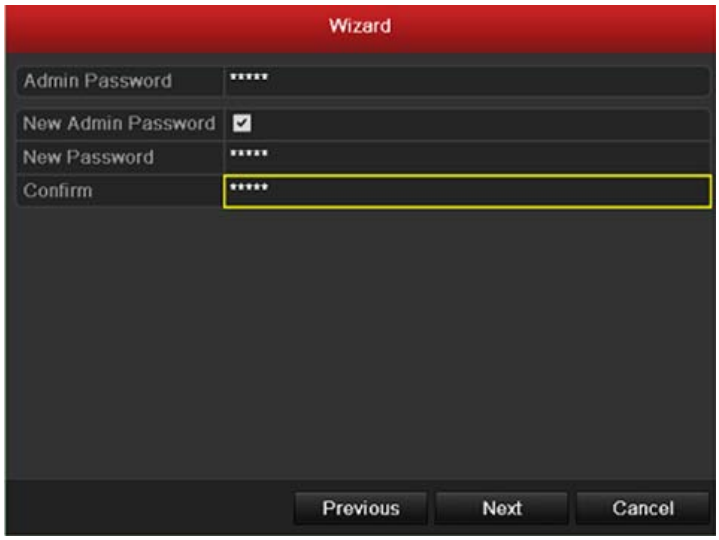

Figure 2.2 Login Window

3. Enter the admin password. By default, the password is 12345.
4. To change the admin password, check the **New Admin Password** checkbox. Enter the new password and confirm the password in the given fields.
5. Click the **Next** button to enter the date and time settings window, as shown in Figure 2.3.

Figure 2.3 Date and Time Settings

6. After the time settings, click **Next** button which will take you back to the Network Setup Wizard window, as shown in Figure 2.4.

Figure 2.4 Network Configuration

7. Click **Next** button after you having configured the network parameters, which will take you to the **HDD Management** window, shown in Figure 2.5.

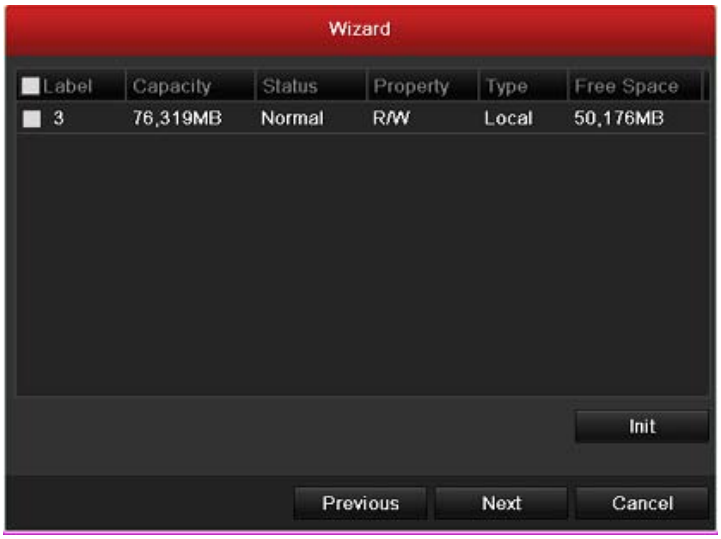

Figure 2.5 HDD Management

8. To initialize the HDD, click the **Init** button. Initialization will remove all the data saved in the HDD.
9. Click **Next** button to enter the **Record Settings** window, as shown in Figure 2.6.

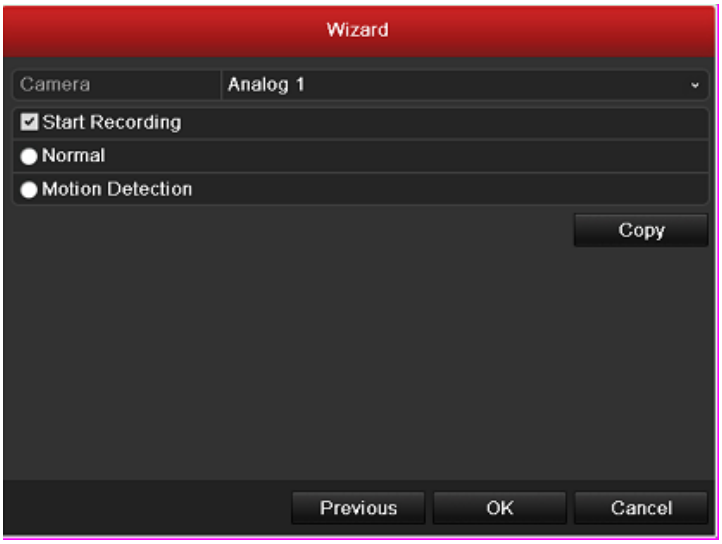

Figure 2.6 Record Settings

10. Click **Copy** to copy the settings to other channels, as shownin Figure 2.7.

Figure 2.7 Copy Record Settings

11. Click **OK** to complete the startup Setup Wizard.

C H A P T E R 3

Live View

3.1 Introduction of Live View

Live view shows you the video image getting from each camera in real time. The DVR will automatically enter Live View mode when powered on. It is also at the very top of the menu hierarchy, thus hitting the ESC many times (depending on which menu you're on) will bring you to the Live View mode.

Live View Icons

In the live view mode, there are icons at the right top of the screen for each channel, showing the status of the record and alarm in the channel, so that you can find problems as soon as possible.

Table 3.1 Description of Live View Icons

Icons	Description
	Alarm (video loss, tampering, motion detection or sensor alarm)
	Record (manual record, schedule record, motion detection or alarm triggered record)
	Alarm & Record

3.2 Operations in Live View Mode

In live view mode, there are many functions provided. The functions are listed below.

- Single Screen: show only one screen on the monitor.
- Multi-screen: show multiple screens on the monitor simultaneously.
- Auto-switch: the screen is auto switched to the next one. And you must set the dwell time for each screen on the configuration menu before enabling the auto-switch. Menu>Configuration>Live View>Dwell Time.
- All-day Playback: play back the recorded videos for current day.
- Aux/Main output switch: the DVR will check the connection of the output interfaces to define the main and auxiliary output interfaces. The priority level for the main and aux output is HDMI>VGA>CVBS. This means if the HDMI is used the output of it will be the main output. If the HDMI is not used, the VGA output will be the main output. See the table below.

Table 3.2 Priorities of Interfaces

	HDMI	VGA	CVBS	Main output	Auxiliary output
1	√	√	√	HDMI	VGA
2	√	×	√	HDMI	CVBS
3	×	√	√	VGA	CVBS
4	×	×	√	CVBS	

- √ means the interface is in use, × means the interface is out of use or the connection is invalid. And the HDMI, VGA and CVBS can be used at the same time.

When the aux output is enabled, the main output can't do any operation, and you can do some basic operation on the live view for the Aux output.

3.2.1 Front Panel Operation

Table 3.3 Front Panel Operation in Live View

Functions	**Front Panel Operation**
Show single screen	Press the corresponding Alphanumeric button. E.g. Press 2 to display only the screen for channel 2.
Show multi-screen	Press the PREV/FOCUS- button.
Manually switch screens	Next screen: left direction button. Previous screen: right direction button.
Auto-switch	Press **Enter** button.
All-day playback	Press **Play** button.
Switch between main and aux output	Press **Main/Aux** button.

3.2.2 Using the Mouse in Live View

Table 3.4 Mouse Operation in Live View

Name	Description
Menu	Enter the main menu of the system by right clicking the mouse.
Single Screen	Switch to the single full screen by choosing channel number from the dropdown list.
Multi-screen	Adjust the screen layout by choosing from the dropdown list.
Previous Screen	Switch to the previous screen.
Next Screen	Switch to the next screen.
Start/Stop Auto-switch	Enable/disable the auto-switch of the screens.
All-day Playback	Play back the video of the selected channel.
Aux Monitor	Switch to the auxiliary output mode and the operation for the main output is disabled.

Note: The *dwell time* of the live view configuration must be set before using **Start Auto-switch**.

Note: If you enter Aux monitor mode and the Aux monitor is not connected, the mouse operation is disabled; witch back to the Main output with the MAIN/AUX button on the front panel or remote.

Note: If the corresponding camera supports intelligent function, the Reboot Intelligence option will be included when right-clicking mouse on this camera.

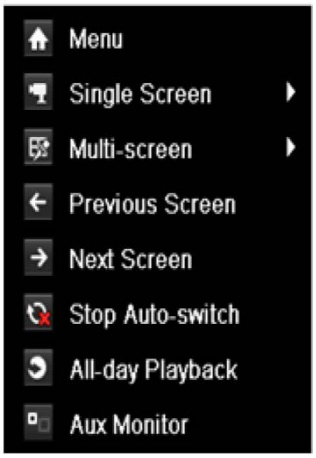

Figure 3.1 Right-click Menu

3.2.3 Using an Auxiliary Monitor

Certain features of the Live View are also available while in an Aux monitor. These features include:

- **Single Screen:** Switch to a full screen display of the selected camera. Camera can be selected from a dropdown list.
- **Multi-screen:** Switch between different display layout options. Layout options can be selected from a dropdown list.
- **Next Screen:** When displaying less than the maximum number of cameras in Live View, clicking this

feature will switch to the next set of displays.

- **Playback:** Enter into Playback mode.
- **PTZ:** Enter PTZ Control mode.
- **Main Monitor:** Enter Main operation mode.

Note: In the live view mode of the main output monitor, the menu operation is not available while in Aux output mode.

3.2.4 Quick Setting Toolbar in Live View Mode

On the screen of each channel, there is a quick setting toolbar which shows when you point the mouse to the bottom of the screen.

Figure 3.2 Quick Setting Toolbar

Table 3.5 Description of Quick Setting Toolbar Icons

Icons	Description	Icons	Description	Icons	Description
	Enable Manual Record		Instant Playback	/	Mute/Audio on
	Capture		PTZ Control		Digital Zoom
	Image Settings		Close		

Instant Playback only shows the record in last five minutes. If no record is found, it means there is no record during the last five minutes.

Digital Zoom can zoom in the selected area to the full screen. Left-click and drag the red box for target zooming in area, as shown in Figure 3.3.

Figure 3.3 Digital Zoom

Image Settings icon can be selected to enter the Image Settings menu. There are four preset modes for selection according to the real situation.

Below is the explanation for each mode.

- Indoor: the image is relatively smoother.
- Dim Light: the image is smoother than the other two modes.
- Outdoor: the image is relatively clearer and sharper. The degree of contrast and saturation is high.

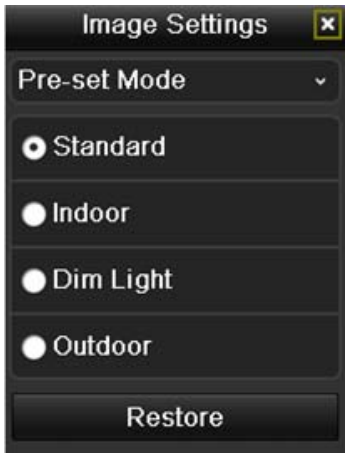

Figure 3.4 Image Settings- Preset

You can also choose the Customize mode to set the image parameters like brightness, contrast, saturation and hue.

Click the **Restore** button to restore the previous settings.

Figure 3.5 Image Settings- Customize

3.3 Adjusting Live View Settings

Purpose:

Live View settings can be customized according to different needs. You can configure the output interface, dwell time for screen to be shown, mute or turning on the audio, the screen number for each channel, etc.

Steps:

1. Enter the Live View Settings interface.

   Menu> Configuration> Live View

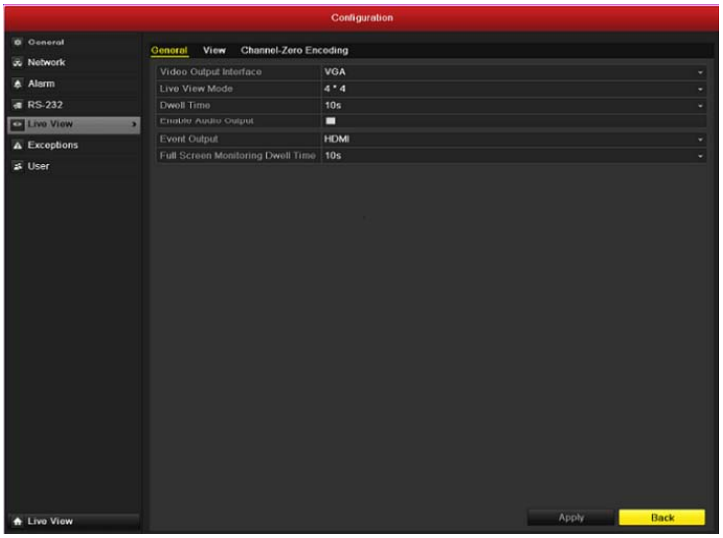

Figure 3.6 Live View-General

The settings available in this menu include:

- **Video Output Interface:** Designates the output to configure the settings for. Outputs include HDMI (depends on the model), VGA, Main CVBS and Spot Output.
- **Live View Mode:** Designates the display mode to be use for Live View.
- **Dwell Time:** The time in seconds to *dwell* between switching of channels when enabling auto-switch in Live View.
- **Enable Audio Output:** Enables/disables audio output for the selected video output.
- **Event Output:** Designates the output to show event video.
- **Full Screen Monitoring Dwell Time:** The time in seconds to show alarm event screen.

2. Setting Camera Order

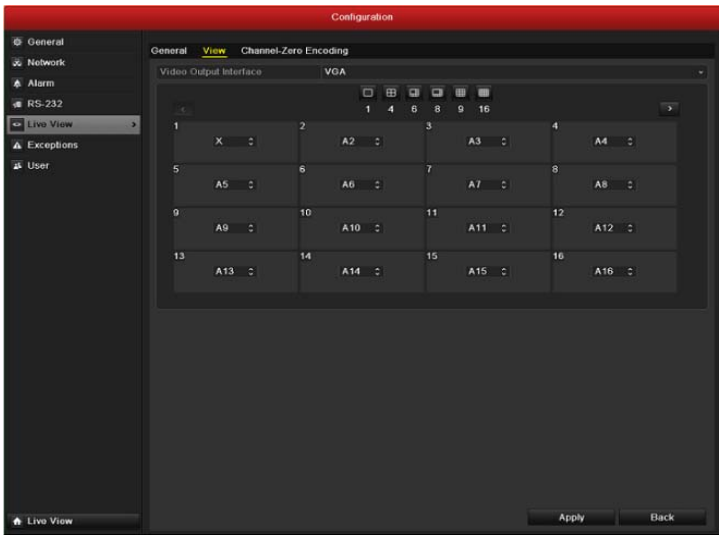

Figure 3.7 Live View- Camera Order

To set the camera order:

1) Select **View**.

2) Click the up and down button at each screen to select the channel you would like to display. Setting an 'X' means the channel will not be displayed.

3) Click the **Apply** button.

3.4 Channel-zero Encoding

Purpose:

Sometimes you need to get a remote view of many channels in real time from web browser or CMS (Client Management System) software, in order to decrease the bandwidth requirement without affecting the image quality, channel-zero encoding is supported as an option for you.

Steps:

1. Enter the **Live View** Settings interface.
2. Select **Channel-Zero Encoding** tab.

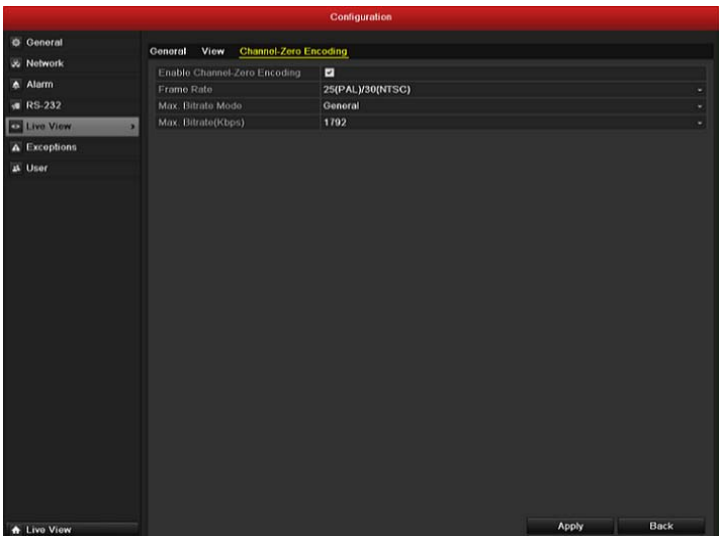

Figure 3.8 Live View- Channel-Zero Encoding

3. Check the checkbox after **Enable Channel-Zero Encoding.**
4. Configure the Frame Rate, Max. Bitrate Mode and Max. Bitrate.

3.5 Locking the System

Purpose:

After locking the system, the monitor turns to the live view mode and if you want to do some operation, you need to enter user name and password tog in again.

Steps:

1. Enter the Shutdown menu.

   Menu>Shutdown

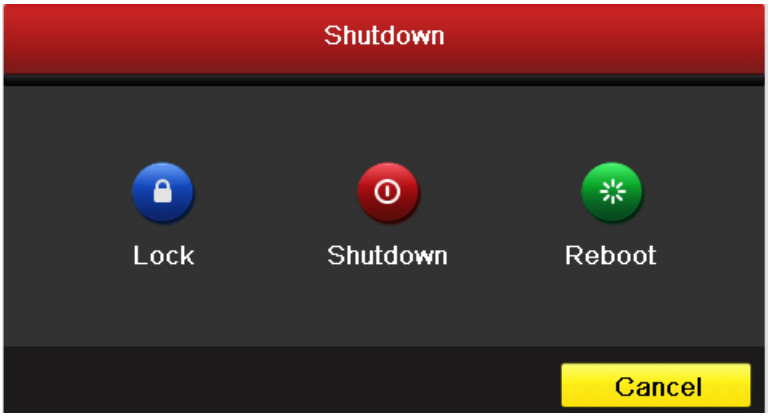

Figure 3.9 Shutdown

2. Click **Lock**.

   Note: After you have locked the system, any click on the screen is invalid. It is required a user name and password to unlock the system.

C H A P T E R 4

PTZ Controls

4.1 Configuring PTZ Settings

Purpose:

Follow the procedure to set the parameters for PTZ. The configuring of the PTZ parameters should be done before you set the PTZ camera.

Before you start:

Check that the PTZ and the DVR are connected properly through RS-485 interface.

Steps:

1. Enter the PTZ Settings interface.

   Menu >Camera> PTZ

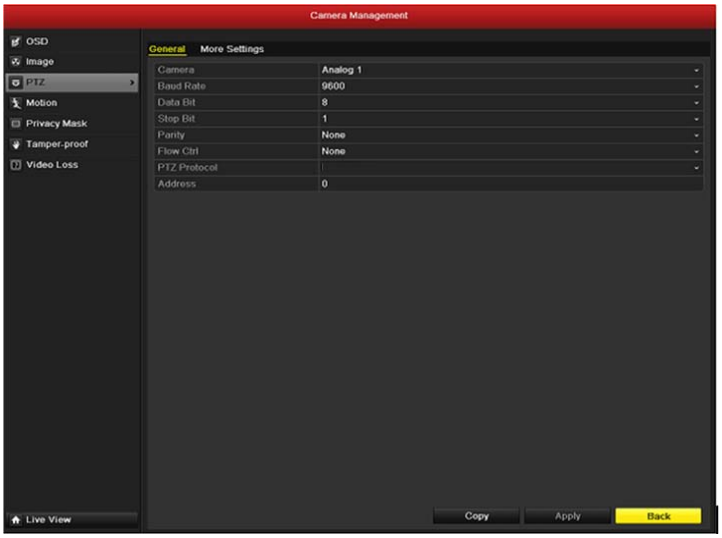

Figure 4.1 PTZ- General

2. Choose the camera for PTZ setting next to **Camera** label.
3. Enter the parameters of the PTZ camera.

   Note: All the parameters should be exactly the same as the PTZ camera parameters.
4. Click **Copy** if you want to configure same settings to other PTZ cameras.
5. Click **Apply** button to save and exit menu.

4.2 Setting PTZ Presets, Patrols & Patterns

Before you start:

Please make sure that the presets, patrols and patterns should be supported by PTZ protocols.

4.2.1 Customizing Presets

Purpose:

Follow the steps to set the Preset location which you want the PTZ camera to point to when an event takes place.

Steps:

1. Enter the PTZ Control interface.

   Menu>Camera>PTZ>More Settings

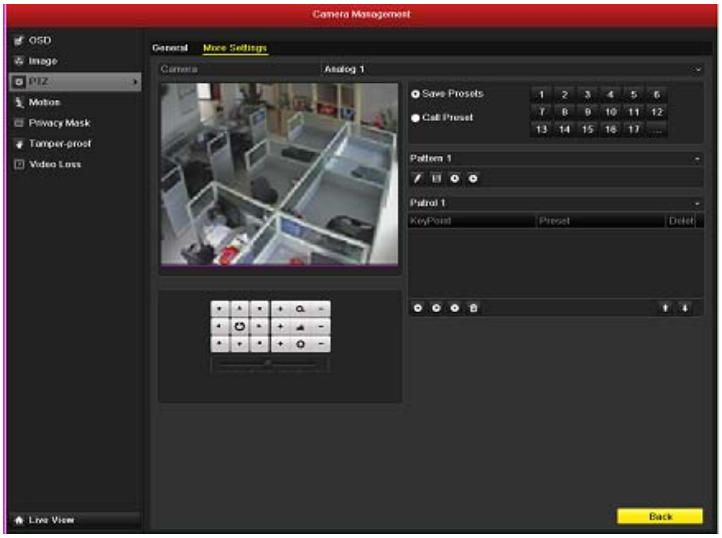

Figure 4.2 PTZ- More Settings

2. Use the directional button to wheel the camera to the location where you want to set preset.
3. Click the round icon before **Save Preset**.
4. Click the preset number to save the preset.

Repeat the steps2-4 to save more presets. If the number of the presets you want to save is more than 17, you can click […] and choose the available numbers.

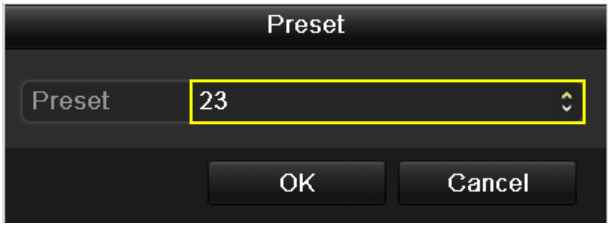

Figure 4.3 More Presets

4.2.2 Calling Presets

Purpose:

This feature enables the camera to point to a specified position such as a window when an event takes place.

Call preset in the PTZ setting interface:

Steps:

1. Enter the PTZ Control interface.
   Menu>Camera>PTZ>More Settings
2. Check the round icon before **Call Preset**.

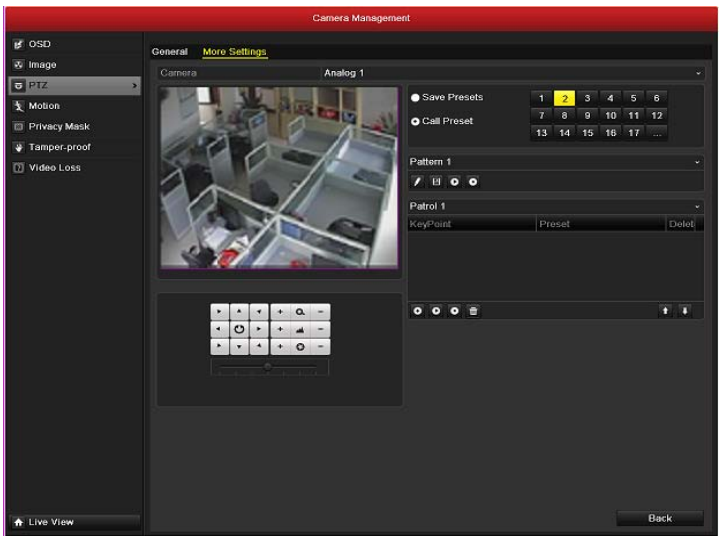

Figure 4.4 PTZ- Call Preset

3. Choose the preset number.

Call preset in live view mode:

Steps:

1. Press the PTZ button on the front panel or click the PTZ Control icon in the quick setting bar to enter the PTZ setting menu in live view mode.

Figure 4.5 PTZ Toolbar

2. Choose C**amera** in the list on the menu.
3. Choose preset in the **Preset** list.

4.2.3 Customizing Patrols

Purpose:

Patrols can be set to move the PTZ to different key points and have it stay there for a set duration before moving on to the next key point. The key points are corresponding to the presets. The presets can be set following the steps above in ***Customizing Presets***.

Steps:

1. Enter the PTZ Control interface.
   Menu>Camera>PTZ>More Settings
2. Select patrol number.
3. Select the under Patrol option box to add key points for the patrol.

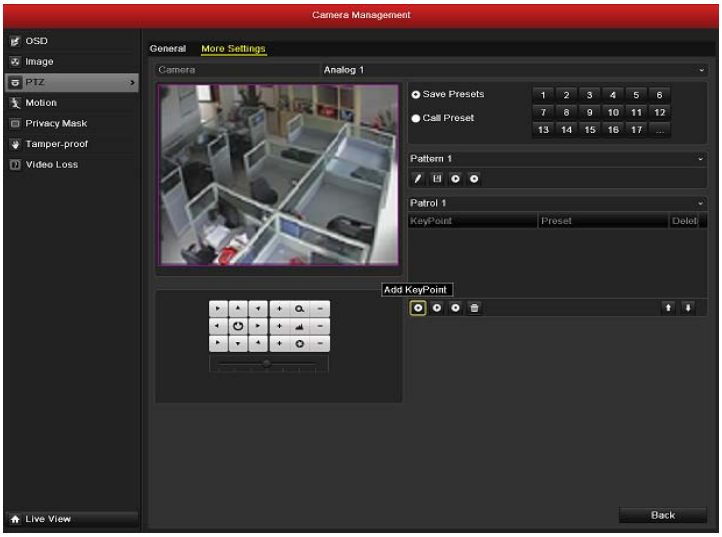

Figure 4.6 PTZ- Add Key Point

4. Configure key point parameters, such as the key point No., duration of staying for one key point and speed of patrol. The key point is corresponding to the preset. The **Key Point No.** determines the order at which the PTZ will follow while cycling through the patrol. The **Duration** refers to the time span to stay at the corresponding key point. The **Speed** defines the speed at which the PTZ will move from one key point to the next.

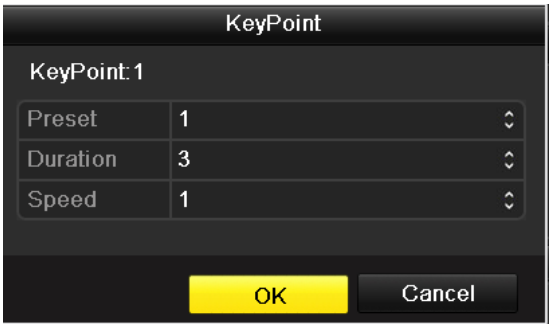

Figure 4.7 Key point Configuration

5. Click **OK** to save the key point to the patrol.

Repeat the above steps to add more key points.

You can also delete all the key points by clicking the trash icon

Figure 4.8KeyPoints Deletion

4.2.4 Calling Patrols

Purpose:

Calling a patrol makes the PTZ to move according the predefined patrol path.

Calling patrol in the PTZ setting interface:

Steps:

1. In the PTZ setting interface.

   Menu> Camera> PTZ> More Settings

2. Select the patrol number, and then click to call the patrol.
3. Click to stop it.

Figure 4.9 Calling Patrol

Calling preset in live view mode:

Steps:

1. Press PTZ control on the front panel or on the remote, or click PTZ Control icon on the quick setting toolbar, to show the PTZ control toolbar.
2. Choose **Patrol** on the control bar.
3. Click the patrol you want to call.

Figure 4.10 PTZ Toolbar- Patrol

4.2.5 Customizing Patterns

Purpose:

Patterns can be set by recording the movement of the PTZ. You can call the pattern to make the PTZ movement according to the predefined path.

Steps:

1. Enter the PTZ Control interface.
   Menu>Camera>PTZ>More Settings
2. Choose pattern number in the option box.

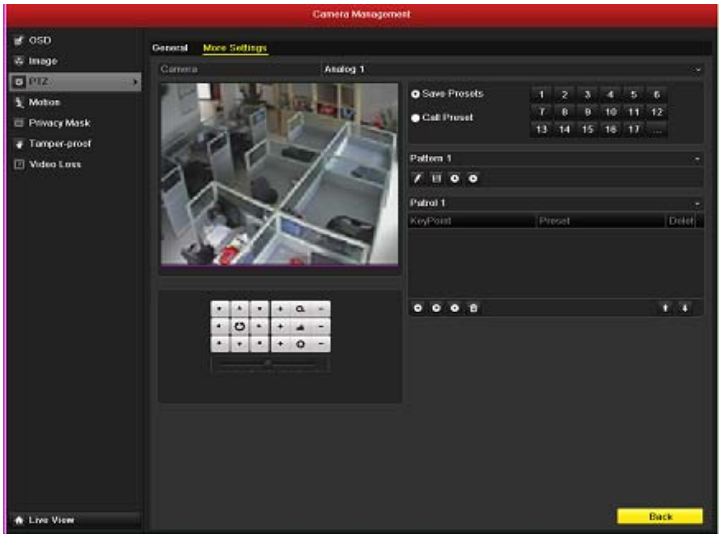

Figure 4.11 PTZ- Pattern

3. Click, and use your mouse to drag the image or click the eight directional buttons in the control box under the image to move the PTZ camera.
   The movement of the PTZ is recorded as the pattern.
4. Click to save the pattern.
   Repeat the above steps to save more patterns.

4.2.6 Calling Patterns

Purpose:

Follow the procedure to move the PTZ camera according to the predefined patterns.

Calling pattern in the PTZ setting interface.

Steps:

1. Enter the PTZ Control interface.
2. Select the pattern number.
3. Click, then the PTZ moves according to the pattern. Click to stop it.

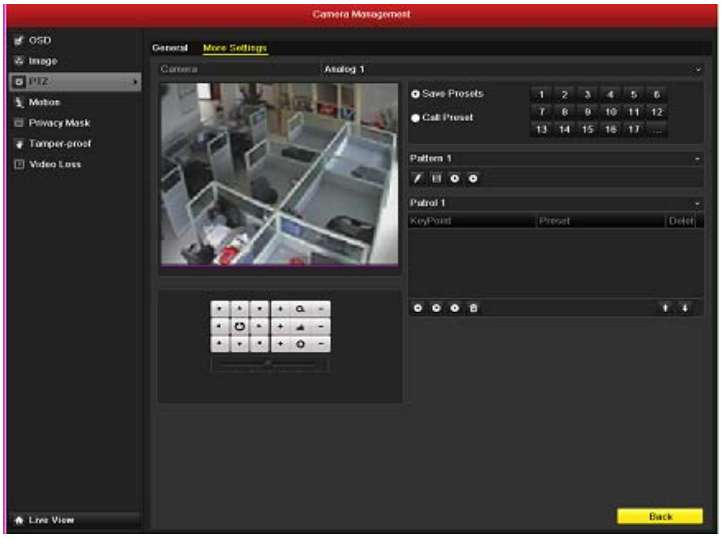

Figure 4.12 PTZ- Calling Pattern

Call pattern in live view mode.

Steps:

1. In the live view mode, press PTZ control on the front panel or on the remote control, or click PTZ Control icon on the quick setting toolbar.
2. And then choose **Pattern** on the control bar.
3. Click the pattern number you want to call

Figure 4.13 PTZ Toolbar- Pattern

4.3 PTZ Control Toolbar

In the Live View mode, you can press the PTZ Control button on the front panel or on the remote control, or choose the PTZ Control icon to enter the PTZ toolbar.

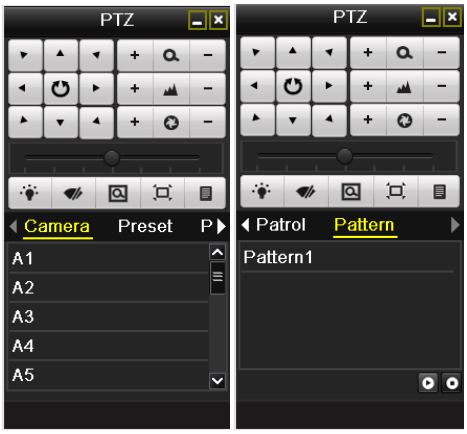

Figure 4.14 PTZ Toolbar

Table 4.1 Description of the PTZ toolbar icons

Icon	Description	Icon	Description	Icon	Description
	Direction button and the auto-cycle button		Zoom+, Focus+, Iris+		Zoom-, Focus-, Iris-
	The speed of the PTZ movement		Light on/off		Wiper on/off
	Zoom		Middle	Preset	Preset
Patrol	Patrol	Pattern	Pattern		Menu
	Previous item		Next item		Start pattern/patrol

	Stop the patrol or pattern movement		Minimize windows		Exit

C H A P T E R 5

Record and Capture Settings

5.1 Configuring Encoding Parameters

Before you start:

1. Make sure that the HDD has already been installed. If not, please install a HDD and initialize it. (Menu>HDD>General)

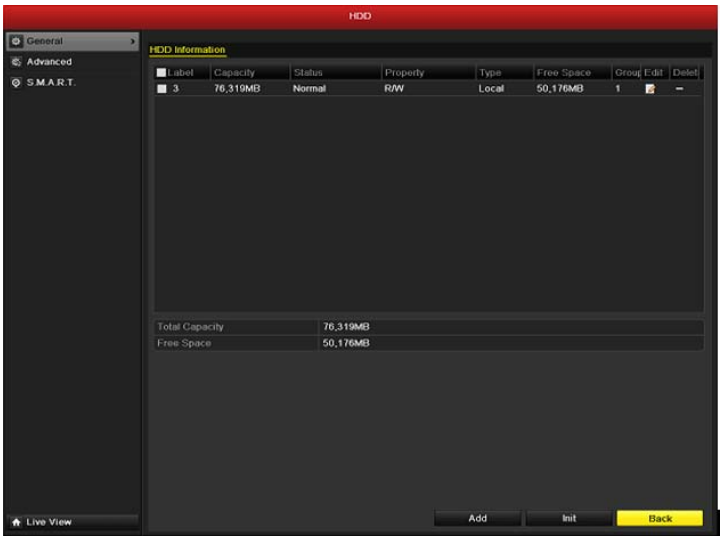

Figure 5.1 HDD- General

2. Click **Advance** to check the storage mode of the HDD.
   1) If the HDD mode is *Quota*, please set the maximum record capacity and maximum picture capacity. For detailed information, see *Chapter 10.5 Configuring Quota Mode*.
   2) If the HDD mode is *Group*, you should set the HDD group. For detailed information, see Chapter 5.9 Configuring HDD Group for Recording and Capture.

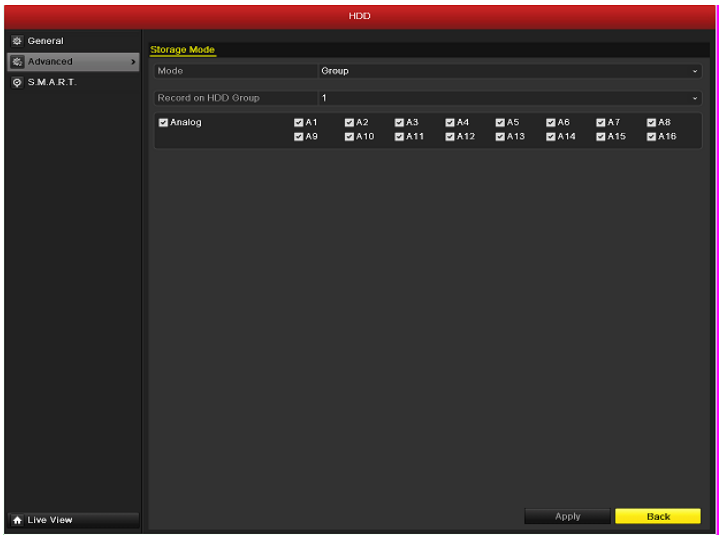

Figure 5.2 HDD- Advanced

Steps:

1. Enter the Record settings interface to configure the encoding parameters:
   Menu>Record>Encoding

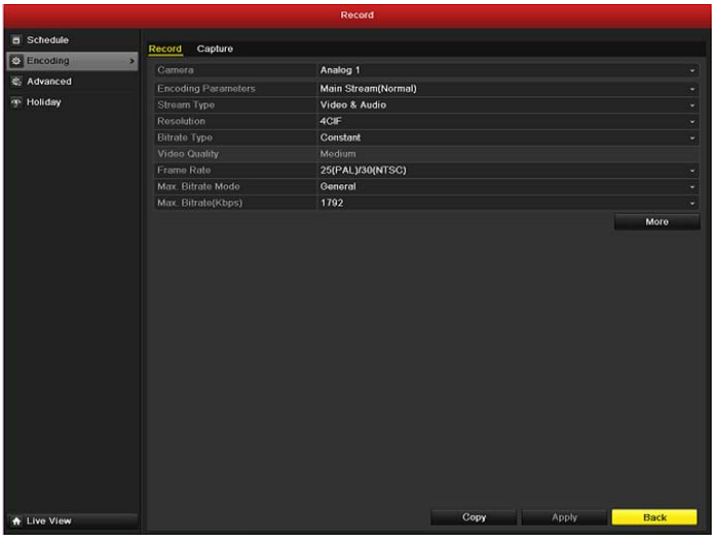

Figure 5.3 Record Encoding

2. Encoding Parameters for Recording

1) Select **Record** to configure. You can configure the stream type, the resolution, the video quality on demand.

2) Click **More** to configure the pre-record, post-record time, expired time, redundant record/capture and whether you want to record audio.

- Pre-record: The time you set to record before the scheduled time or event. For example, if you set the pre-record time as 5 seconds, the camera records it at 9:59:55.
- Post-record: The time you set to record after the event or the scheduled time. For example, when an alarm triggered the recording ends at 11:00, if you set the post-record time as 5 seconds, it records till 11:00:05.
- Expired Time: The expired time is the longest time for a record file to be kept in the HDD, if the deadline is reached, the file will be deleted. You can set the expired time to 0, and then the file will not be deleted. The actual keeping time for the file should be determined by the capacity of the HDD.
- Redundant Record/ Capture: Enabling redundant record or capture means you save the record and captured picture in the redundant HDD. See Chapter 5.8 Configuring Redundant Record/ Capture.
- Record Audio: Choose “yes” to record the sound, “no” to record the image without sound.

Figure 5.4 Record Encoding- More

3) Click **Apply** to save the settings.
4) Click **OK** to back to the upper level menu.
5) You can copy the settings to other channels by clicking **Copy**, if the setting can also be used for other channels.

Figure 5.5 Copy Camera Settings

Note: The redundant record/capture is to decide whether you want the camera to save the record files or captured pictures in the redundant HDD. You must configure the redundant HDD in HDD settings. For detailed information, see *Chapter 10.4.2 Setting HDD Property*.

3. Encoding Parameters for Capture

1) Select the **Capture**.

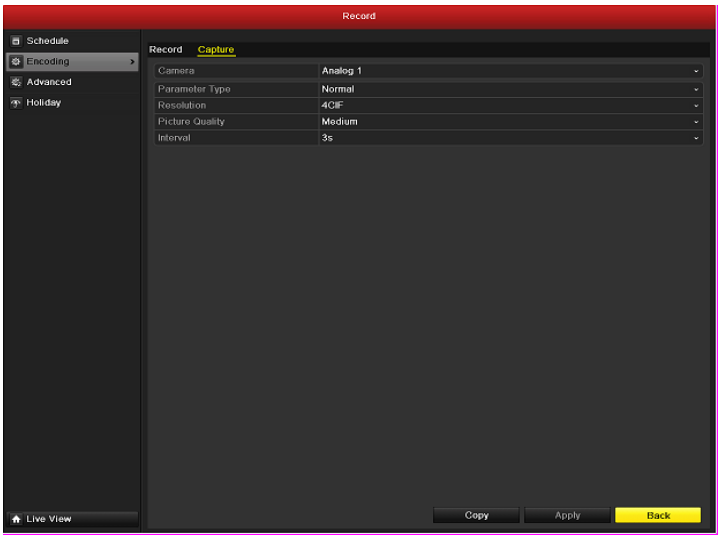

Figure 5.6 Capture Encoding

2) Configure the parameters.
3) Click **Apply** to save the settings.
4) If the parameters can also be used to other channels, click **Copy** to copy the settings to other channels.

Note: The interval is the time period between two capturing actions. You can configure all the parameters on this menu on your demand.

5.2 Configuring Record/Capture Schedule

Purpose:

Set the record schedule, and then the camera will automatically start/stop recording according to the configured schedule.

Steps:

1. Enter the Record Schedule interface.
Menu>Record/Capture>Schedule

2. Configure Record Schedule
1) Select Record/Capture Schedule.

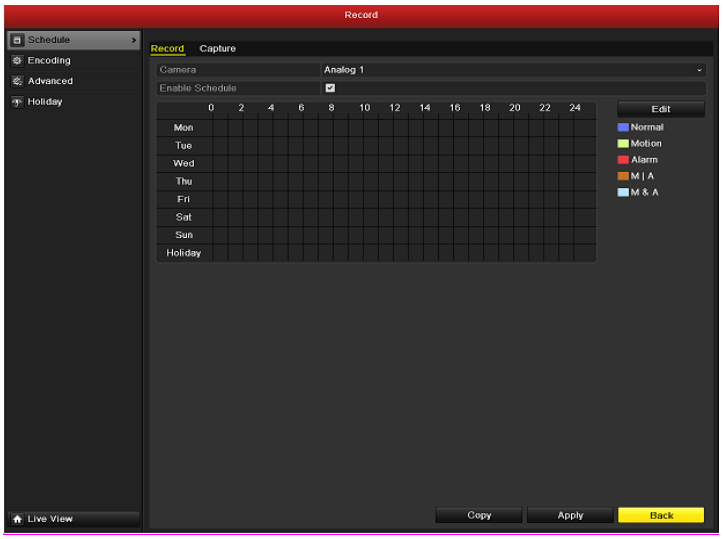

Figure 5.7 Record Schedule

2) Choose the camera you want to configure.
3) Select the check box after the **Enable Schedule** item.
4) Click **Edit**.
5) In the message box, you can choose the day to which you want to set schedule.
6) To schedule an all-day recording, check the checkbox after the **All Day** item.

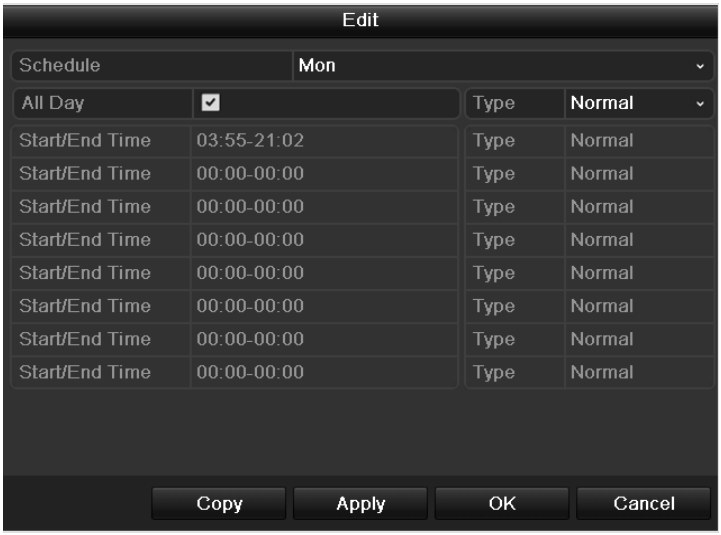

Figure 5.8 Edit Schedule

7) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other. Repeat the above steps5)-7) to schedule recording/capture for other days in the week. If the schedule can also be set to other days, click **Copy**.

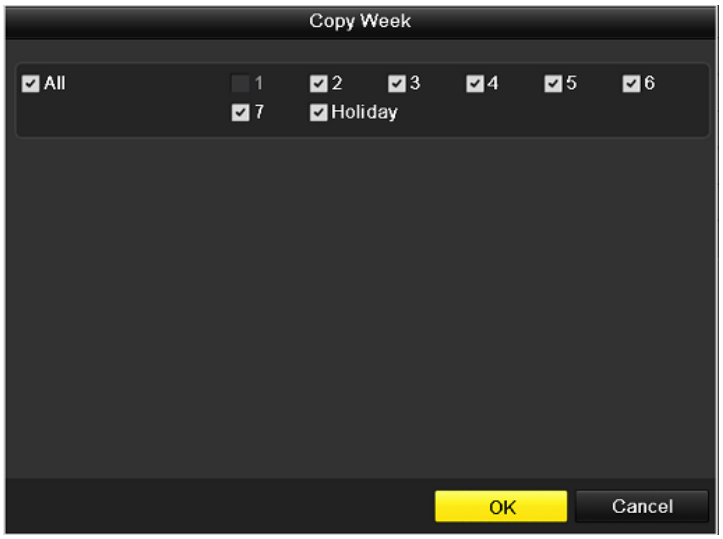

Figure 5.9 Copy Schedule to Other Days

8) Click **OK** to save setting and back to upper level menu.

9) Click **Apply** in the Record Schedule interface to save the settings.

You can repeat steps 5)-8) to set schedule for other channels. If the settings can also be used to other channels, click **Copy**, and then choose the channel to which you want to copy.

Figure 5.10 Copy Schedule to Other Channels

5.3 Configuring Motion Detection Record and Capture

Purpose:

Follow the steps to set the motion detection parameters. In the live view mode, once a motion detection event takes place, the video can analyze it and do many actions to handle it. Enabling motion detection function can trigger certain channels to start recording, or trigger full screen monitoring, audio warning, notify the surveillance center and so on.

Steps:

1. Enter the Motion Detection interface.

Menu>Camera>Motion

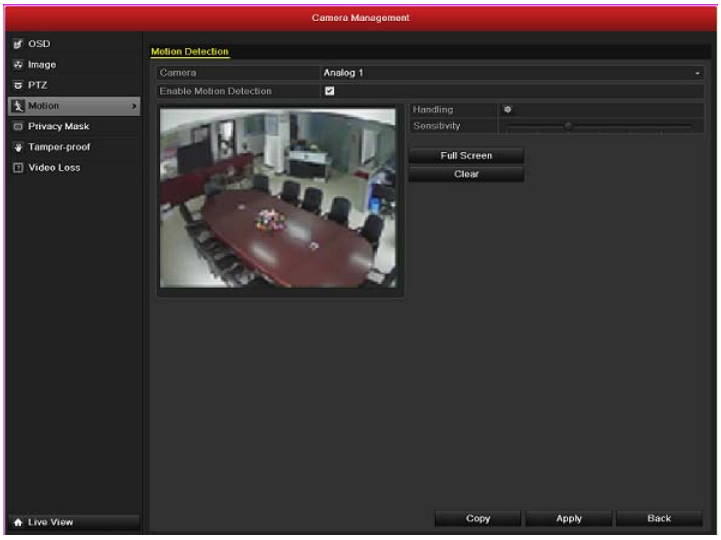

Figure 5.11 Motion Detection

2. Configure Motion Detection：

1) Choose camera you want to configure.
2) Check the checkbox after **Enable Motion Detection**.
3) Drag and draw the area for motion detection by mouse. If you want to set the motion detection for all the area shot by the camera, click **Full Screen**. To clear the motion detection area, click **Clear**.

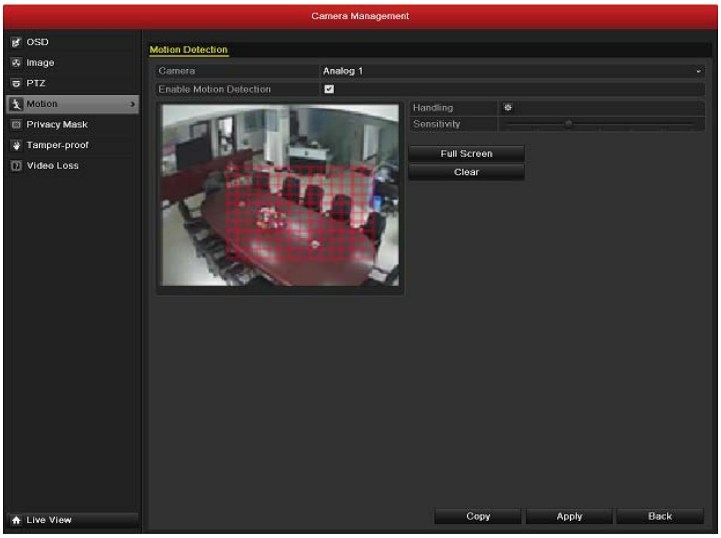

Figure 5.12 Motion Detection- Mask

4) Click **Handling**, and the message box for channel information will pop up.

Figure 5.13 Motion Detection Handling

5) Select the channels which you want the motion detection event to trigger recording.

6) Click **Apply** to save the settings.

7) Click OK to back to the upper level menu.

8) Exit the Motion Detection menu.

3. Enter Schedule settings interface.

Menu> Record> Schedule>Record/Capture Schedule

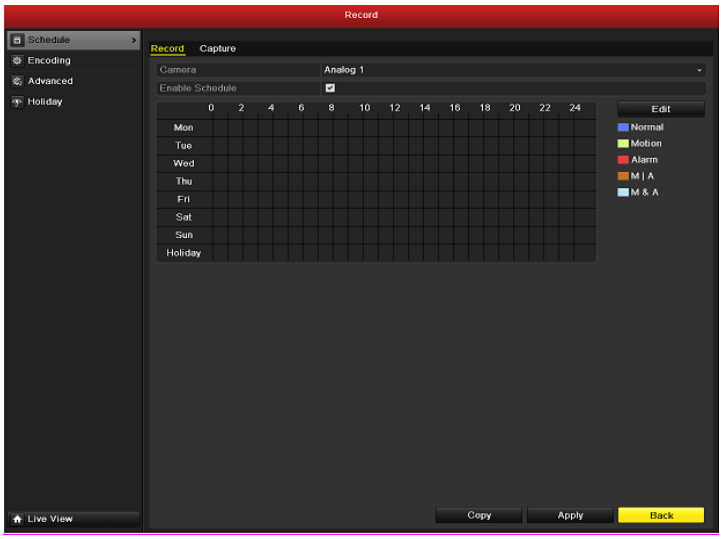

Figure 5.14 Record Schedule

1) Check the checkbox after the **Enable Schedule** item.
2) Click **Edit**.

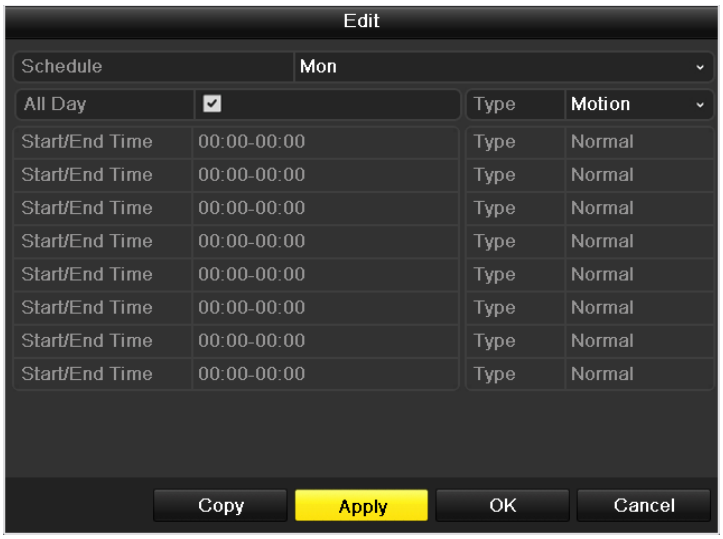

Figure 5.15 Edit Schedule- Motion Detection

3) In the message box, you can choose the day to which you want to set schedule.
4) Set the **Type** as Motion.
5) To schedule an all-day recording, check the checkbox after the **All Day** item.

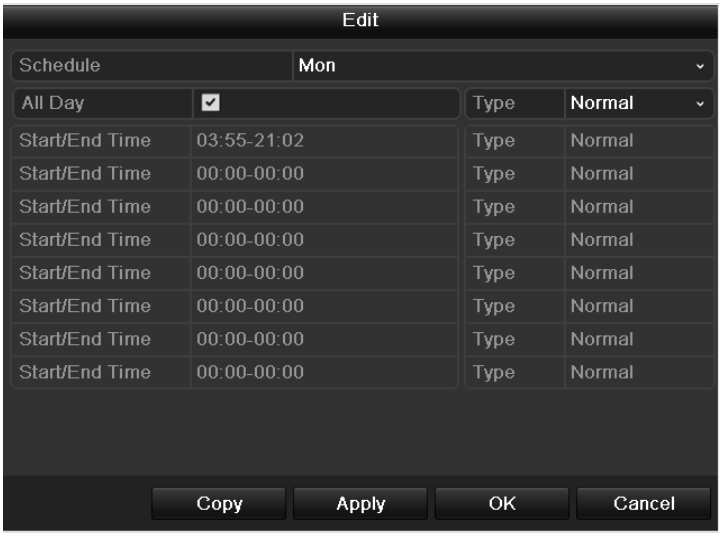

Figure 5.16 Edit Schedule- All Day

6) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.

Repeat the above steps11)-13) to schedule motion detection triggered recording/capture for all the week. If the schedule can also be set to other days, click **Copy**.

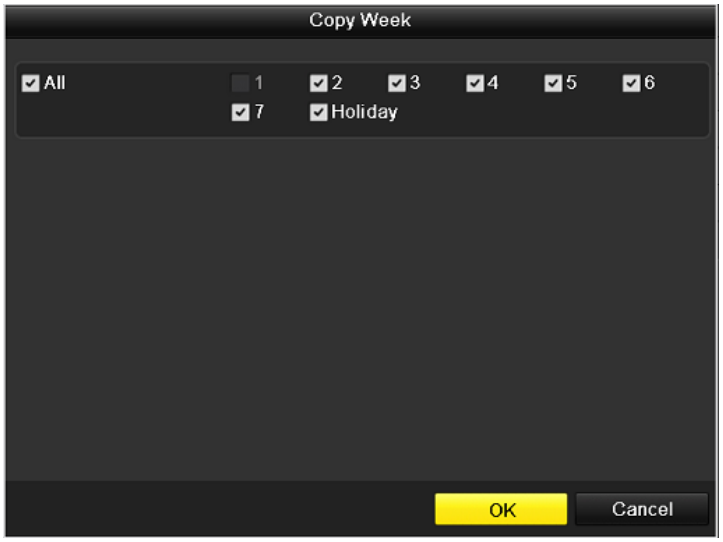

Figure 5.17 Copy Schedule to Other Days

7) Click **OK** to back to upper level menu.

You can repeat steps to set schedule for other channels, if the settings can also be used to other channels, click **Copy**, and then choose the channel to which you want to copy.

Figure 5.18 Copy Schedule to Other Channels

5.4 Configuring Alarm Triggered Record and Capture

Purpose:

Follow the procedure to configure alarm triggered recording or capture.

Steps:

1. Enter the Alarm setting interface.

   Menu> Configuration> Alarm

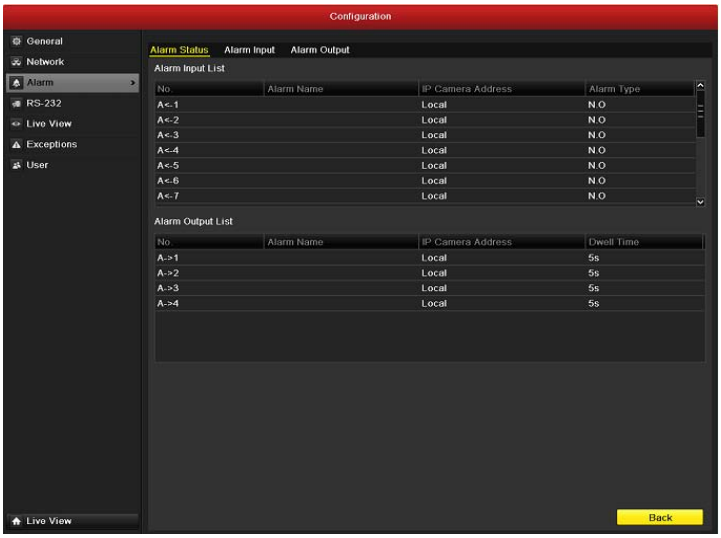

Figure 5.19 Alarm Settings

2. Click **Alarm Input**.

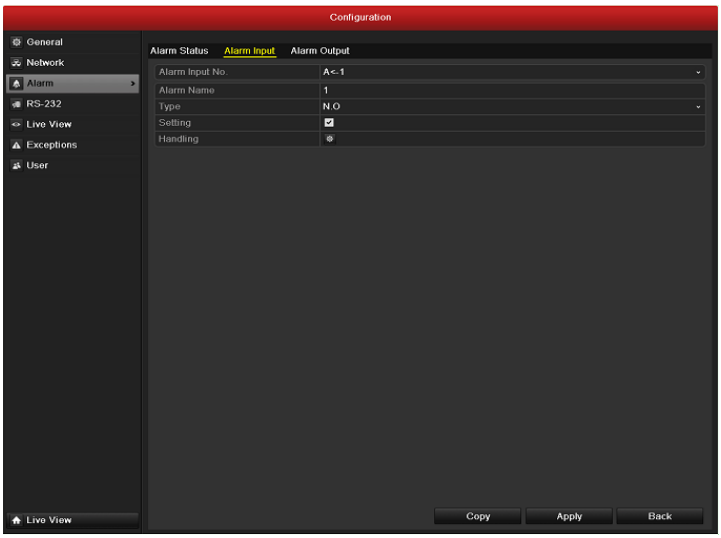

Figure 5.20 Alarm Settings- Alarm Input

1) Select Alarm Input number and configure alarm parameters.
2) Choose N.O (normally open) or N.C (normally closed) for alarm type.
3) Check the checkbox for Setting .
4) Click **Handling**.

Figure 5.21 Alarm Handling

5) Choose the alarm triggered recording channel.
6) Check the checkbox to select channel.
7) Click **Apply** to save settings.
8) Click **OK to** back to the upper level menu.

Repeat the above steps to configure other alarm input parameters.

If the setting can also be applied to other alarm inputs, click **Copy** and choose the alarm input number.

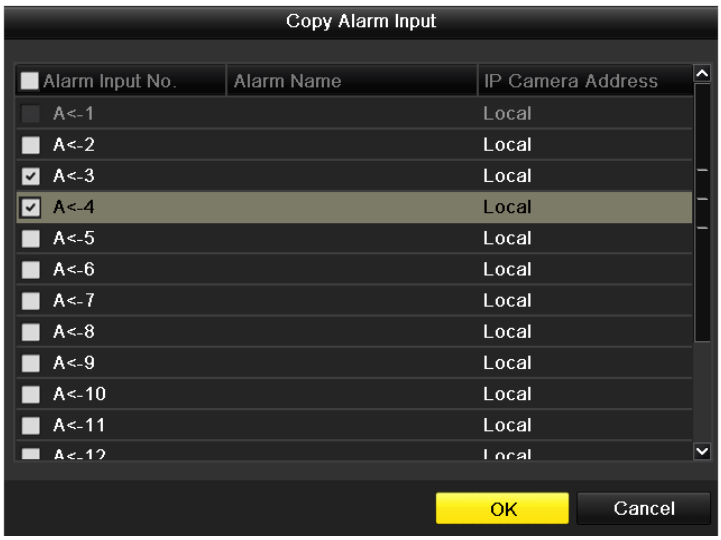

Figure 5.22 Copy Alarm Input

3. Enter Record/Capture Schedule setting interface.

Menu> Record> Schedule

1) Click Record/Capture Schedule
2) Check the checkbox after the **Enable Schedule**.

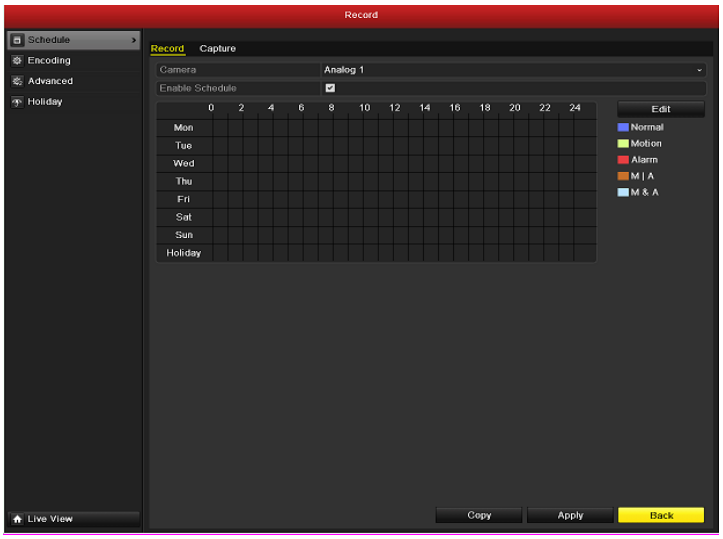

Figure 5.23 Record Schedule

3) Click **Edit**.
4) Set the **Type** to **Alarm**
5) In the message box, you can choose the day to which you want to set schedule.
6) To schedule an all-day recording, check the checkbox after the **All Day** item.
7) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time.

   Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.

   Repeat the above steps4)-7) to schedule alarm triggered recording/capture for all the week. If the schedule can also be set to other days, click **Copy**.
8) Click **OK** to back to the upper level menu.

5.5 Manual Record and Continuous Capture

Purpose:

Follow the steps to set parameters for the manual record and continuous capture. Using manual record and continuous capture, you don't need to set a schedule for recording or capture.

Steps:

1. Enter the Manual settings interface.

Menu> Manual

Or press the **REC/SHOT** button on the front panel.

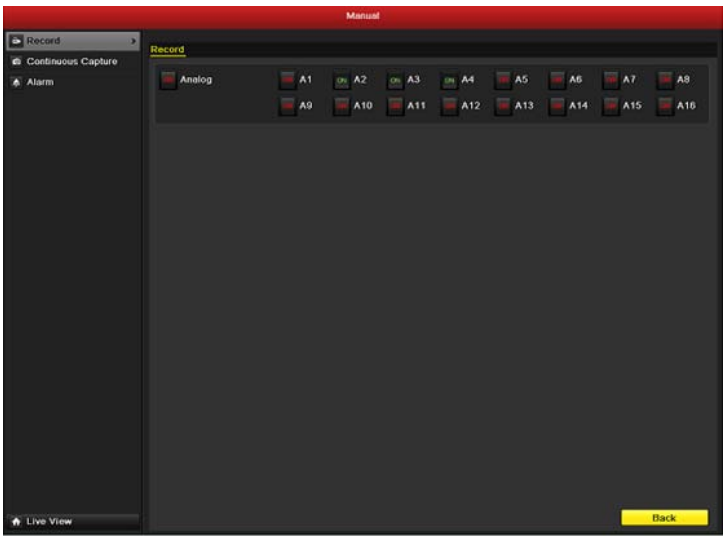

Figure 5.24 Manual Record

2. Enabling Manual Record

1) Select **Record** on the left bar.

2) Click the status button before camera number to change OFF to ON.

3. Disable manual record.

Click the status button to change ON to OFF.

Note: After rebooting all the manual records enabled are canceled.

4. Enabling and disabling the continuous capture

1) Select **Continuous Capture** on the left bar.

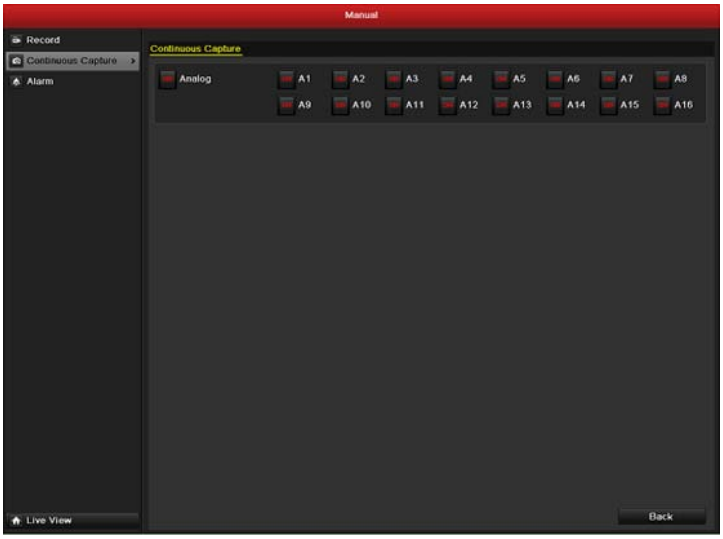

Figure 5.25 Continuous Capture

2) Click the status button before camera number to change OFF to ON.
3) Disable continuous capture.
4) Click the status button to change ON to OFF.

Note: After rebooting, all the continuous capture will be canceled.

5.6 Configuring Holiday Record and Capture

Purpose:

Follow the steps to configure the record or capture schedule on holiday for that year. You may want to have different plan for recording and capture on holiday.

Steps:

1. Enter the Record setting interface.
   Menu>Record
2. Choose **Holiday** on the left bar.

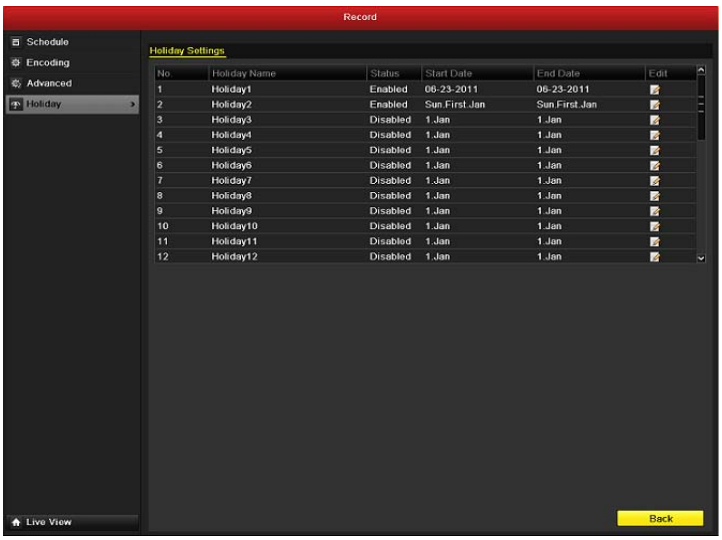

Figure 5.26 Holiday Settings

3. Enable Edit Holiday schedule.
   1) Click to enter the Edit interface.

Figure 5.27 Edit Holiday Settings

   2) Check the checkbox after **Enable Holiday**.
   3) Select Mode from the dropdown list.
      There are three different modes for the date format to configure holiday schedule.

4) Set the start and end date.

5) Click **Apply** to save settings.

6) Click **OK** to exit the Edit interface.

4. Enter Record/Capture Schedule settings interface.

Menu> Record> Schedule

1) Select **Record/Capture.**

2) Check the checkbox after **Enable Schedule**.

3) Click **Edit.**

4) Select **Holiday** from the **Schedule** dropdown list.

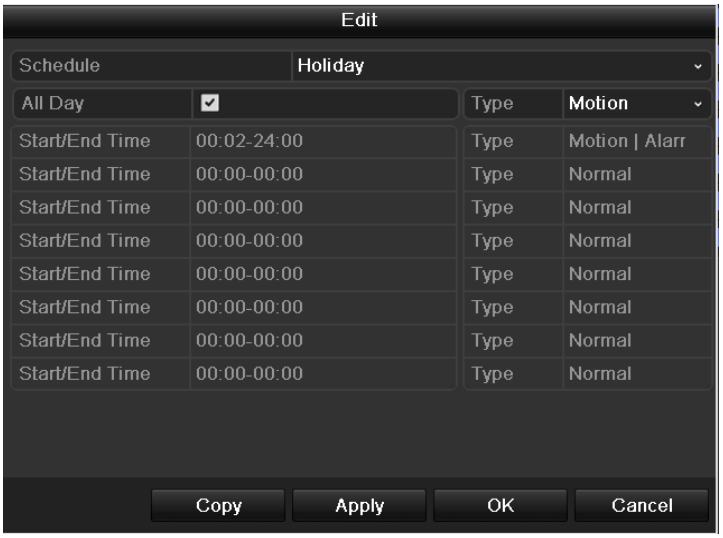

Figure 5.28 Edit Schedule- Holiday

5) Select **Motion** from the **Type** dropdown list.

6) If you need all day recording, check the **All Day** checkbox. Otherwise leave it blank.

7) Set start/end time for holiday schedule.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.

In the time table of the channel, both holiday schedule and normal day schedule are displayed.

Repeat the above steps4)-7) to set Holiday schedule for other channel. If the holiday schedule can also be used to other channels, click **Copy** and choose the channel you want to apply the settings.

5.7 Configuring Other Recording and Capture Types

Purpose:

Other recording and capture types refer to the Motion | Alarm (motion or alarm) and Motion & Alarm triggered recording and capture.

For motion detection and alarm recording and capture, please refer to *Chapter 5.3* and *Chapter 5.4*. In this chapter, the configuration for Motion | Alarm (motion or alarm) and Motion & Alarm triggered recording and capture will be described only.

Steps:

1. Enter the Record setting interface.

   Menu> Record> Schedule

2. Select **Record/ Capture.**

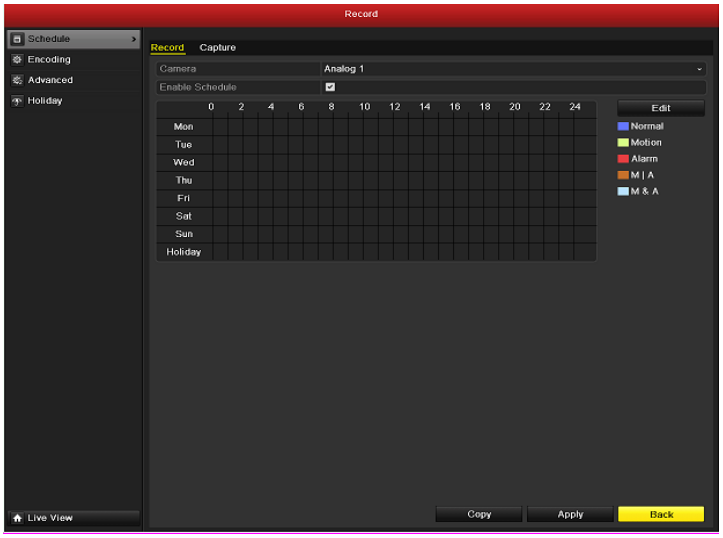

Figure 5.29 Record Schedule

3. Schedule Motion | Alarm or Motion & Alarm triggered recording.
   1) Select the channel you want to set schedule.
   2) Check the check box after Enable Schedule.
   3) Click **Edit**.
   4) Select Motion | Alarm or Motion & Alarm in the **Type** dropdown list.

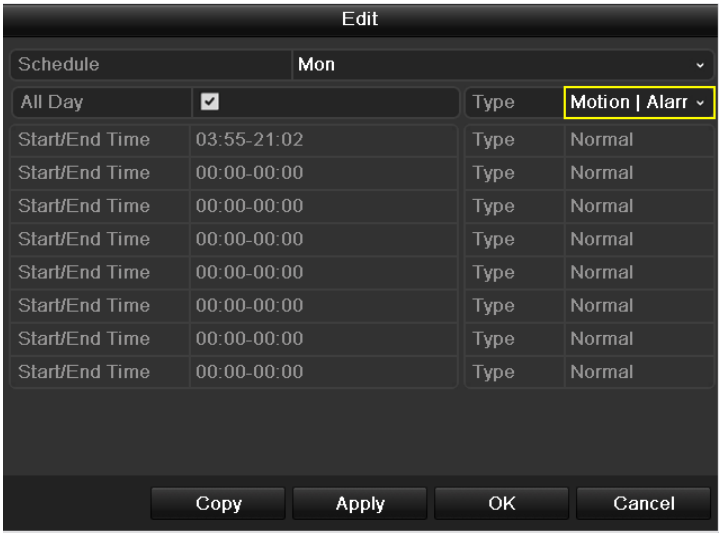

Figure 5.30 Edit Schedule- Motion| Alarm

5) To schedule an all-day recording, select the checkbox after the **All Day** item.

6) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.

Repeat the above steps to schedule for all the week. If the schedule can also be applied to other days, click **Copy**.

7) Click **Apply** to save settings.

8) Click **OK** to back to the upper level menu.

Repeat the above steps to schedule Motion | Alarm or Motion & Alarm triggered recording/capture to other channels. If the setting can also be applied to other channels, click **Copy** and then choose the channel number.

5.8 Configuring Redundant Recording and Capture

Purpose:

Enabling redundant recording and capture, which means saving the record files and captured pictures not only in the R/W HDD but also in the redundant HDD, will effectively enhance the data safety and reliability. .

Steps:

1. Enter HDD Information interface.

Menu> HDD

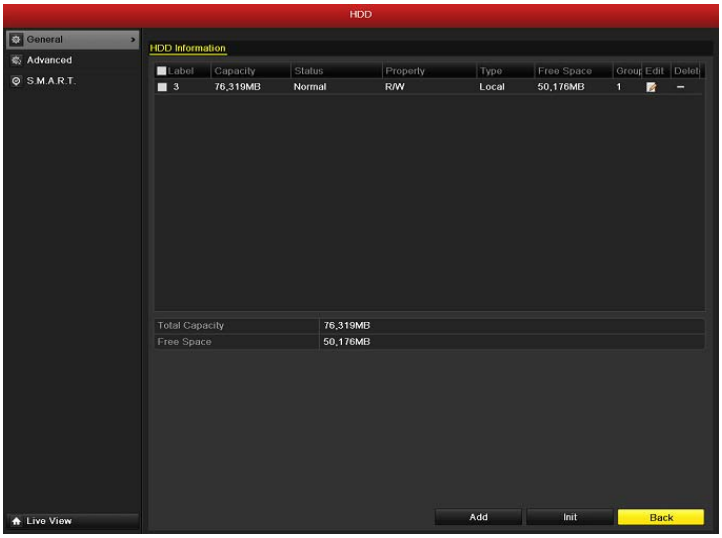

Figure 5.31 HDD General

2. Select the **HDD** and click to enter the Local HDD Settings interface.

1) Set the HDD property to Redundant.

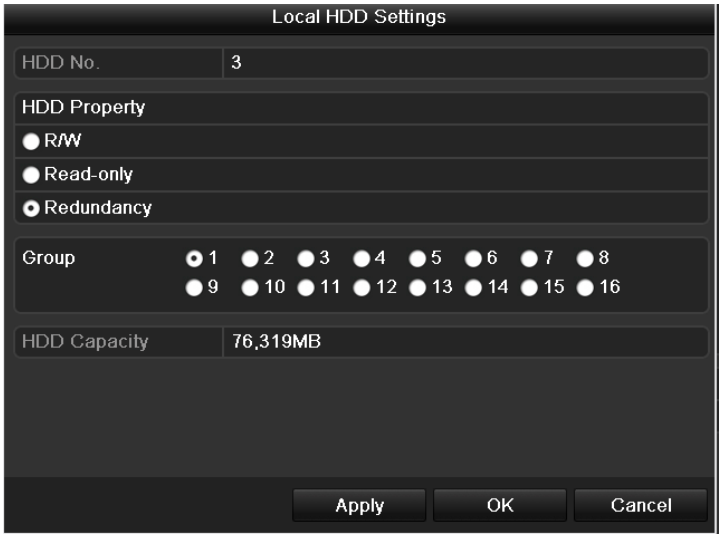

Figure 5.32 HDD General-Editing

2) Click **Apply** to save the settings.

3) Click **OK** to back to the upper level menu.

Note: You must set the Storage mode in the HDD advanced settings to Group before you set the HDD property to Redundant. For detailed information, please refer to *Chapter 10.4 Managing HDD Group*. There should be at least another HDD which is in Read/Write status.

3. Enter the Record setting interface.

Menu> Record> Encoding

1) Select **Record.**

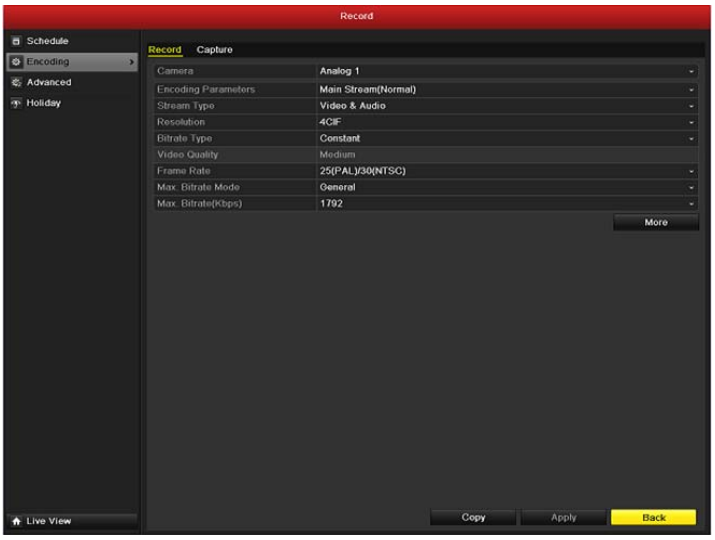

Figure 5.33 Encoding Record

2) Select Camera you want to configure.

3) Click **More Settings.**

Figure 5.34 Encoding Record- More

4) Set the **Redundant Record/Capture** to **Yes**.

5) Click **OK** to save settings and back to the upper level menu.

Repeat the above steps for configuring other channels.

5.9 Configuring HDD Group for Recording and Capture

Purpose:

You can group the HDDs and save the record files and captured pictures in certain HDD group.

Steps:

1. Enter HDD setting interface.

Menu>HDD

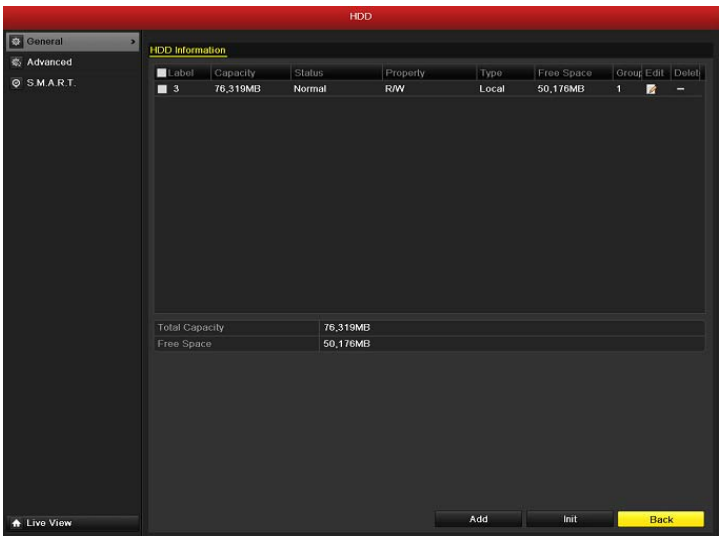

Figure 5.35 HDD General

2. Select **Advanced** on the left bar.

Check whether the storage mode of the HDD is Group. If not, set it to Group. For detailed information, please refer to *Chapter 10.4 Managing HDD Group*.

3. Select **General** in the left bar.

Click to enter editing interface.

4. Configuring HDD group.

1) Choose a group number for the HDD group.

2) Click **Apply** and then in the pop-up message box, click **Yes** to save your settings.

3) Click **OK** to back to the upper level menu.

Repeat the above steps to configure more HDD groups.

5. Choose the Channels which you want to save the record files and captured pictures in the HDD group.

1) Select **Advanced** on the left bar.

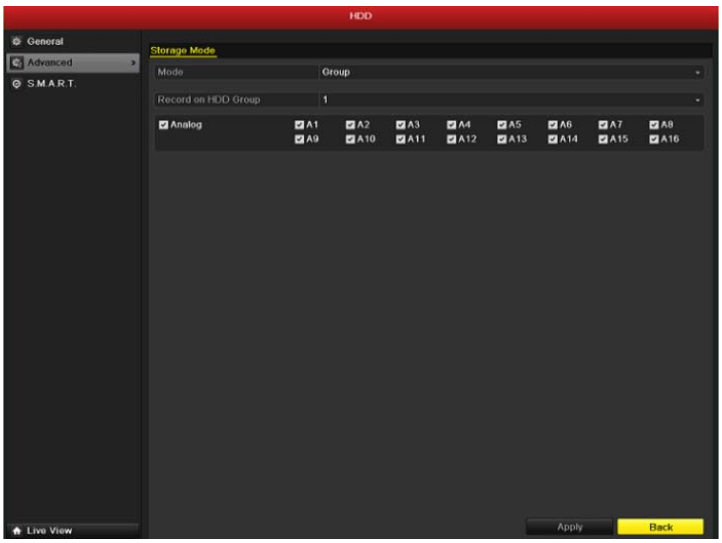

Figure 5.36 HDD Advanced

2) Choose Group number in the dropdown list of **Record on HDD Group**

3) Check the channels you want to save in this group.

4) Click **Apply** to save settings.

Note: After you having configured the HDD groups, you can configure the Recording and Capture settings following the procedure provided in *Chapter 5.2-5.7*.

5.10 Files Protection

Purpose:

You can lock the recorded files or set the HDD property to Read-only to protect the record files from being overwritten.

Protect file by locking the record files:

Steps:

1. Enter Playback setting interface.

   Menu> Playback

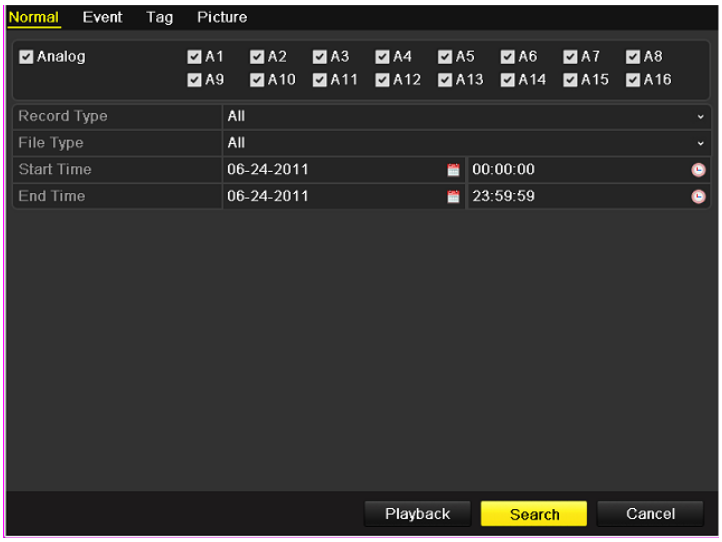

Figure 5.37 Playback

2. Select the channels you want to investigate by checking the checkbox to .
3. Configure the record type, file type start/end time.
4. Click **Search** to show the results.

Figure 5.38 Playback- Search Result

5. Protect the record files.

1) Find the record files you want to protect, and then click the icon which will turn to , indicating that the file is locked.

Note: Only the record files with size bigger than 1GB can be locked, otherwise it can't be protected by locking it.

2) Click to change it to to unlock the file and the file is not protected.

Figure 5.39 Unlocking Attention

Protect file by setting HDD property to Read-only

Steps:

1. Enter HDD setting interface.

Menu> HDD

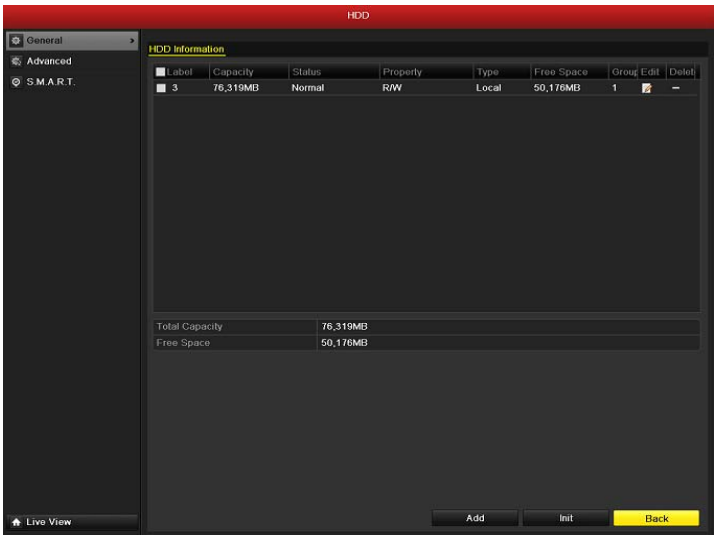

Figure 5.40 HDD General

2. Click to edit the HDD you want to protect.

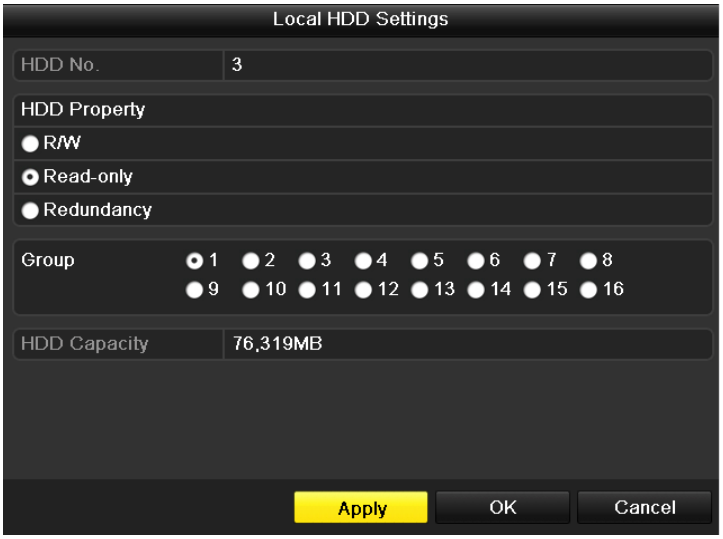

Figure 5.41 HDD General- Editing

Note: To edit HDD property, you need to set the storage mode of the HDD to Group. See *Chapter Managing 10.4 HDD Group.*

3. Set the HDD to Read-only.

4. Click **OK** to save settings and back to the upper level menu.

Note: You can't save any files in a Read-only HDD. If you want to save files in the HDD, change the property to R/W.

Note: If there is only one HDD and is set to Read-only, the DVR can't record any files. Only live view mode is available.

If you set the HDD to Read-only when the DVR is saving files in it, then the file will be saved in next R/W HDD. If there is only one HDD, the recording will be stopped.

C H A P T E R 6

Playback

6.1 Playing Back Record Files

6.1.1 Playing Back by Channel

Purpose:

Play back the recorded video files of a specific channel in the live view mode. Channel switch is supported.

Instant playback by channel:

Steps:

Choose a channel in live view mode using the mouse and click the button in the quick setting toolbar.

Note: Only record files recorded during the last five minutes on this channel will be played back.

Figure 6.1 Instant Playback Interface

All-day Playback by channel

1. Enter the All-day Playback interface.

   Mouse: right click a channel in live view mode and select All-day Playback from the menu, as shown in Figure 6.2.

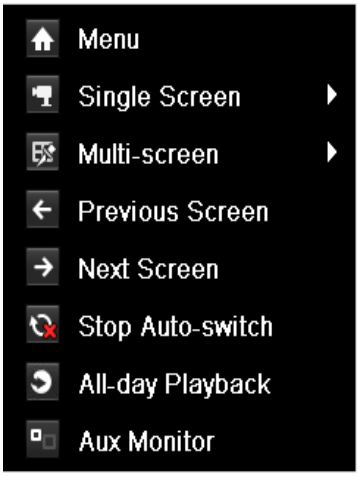

Figure 6.2 Right-click Menu under Live View

Front Panel: press **PLAY** button to play back record files of the channel under single-screen live view mode.

Under multi-screen live view mode, the recorded files of the top-left channel will be played back.

Note: Pressing numerical buttons will switch playback to the corresponding channels during playback process.

2. Playback management.

The toolbar in the bottom part of Playback interface can be used to control playing progress, as shown in Figure 6.3.

Figure 6.3 All-day Playback Interface

The channel and time selection menu displays by moving the mouse to the right of the playback interface. Click the channel(s) if you want to switch playback to another channel or execute simultaneous playback of multiple channels, as shown in Figure 6.4.

Figure 6.4 All-day Playback Interface with Channel List

Dates marked in colors:

11 : No record files in this day.

9 : There is record file(s) in this day (not current day).

10 : Mouse cursor is located.

Figure 6.5 Toolbar of All-day Playback

Table 6.1 Detailed Explanation of All-day-playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
/	Audio on /Mute	/	Start/Stop clipping	30S	30s forward	30S	30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
/	Pause reverse play/ Reverse play/ Single-frame reverse play	/	Pause play/ Play/ Single-frame play		Stop		Speed up
	Previous day		Next day		Hide		Exit
	Process bar		Video type bar				

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.1.2 Playing Back by Time

Purpose:

Play back video files recorded in specified time duration. Multi-channel simultaneous playback and channel switch are supported.

Steps:

1. Enter playback interface.
   Menu>Playback
2. Set search conditions and click the Playback button to enter Playback interface.

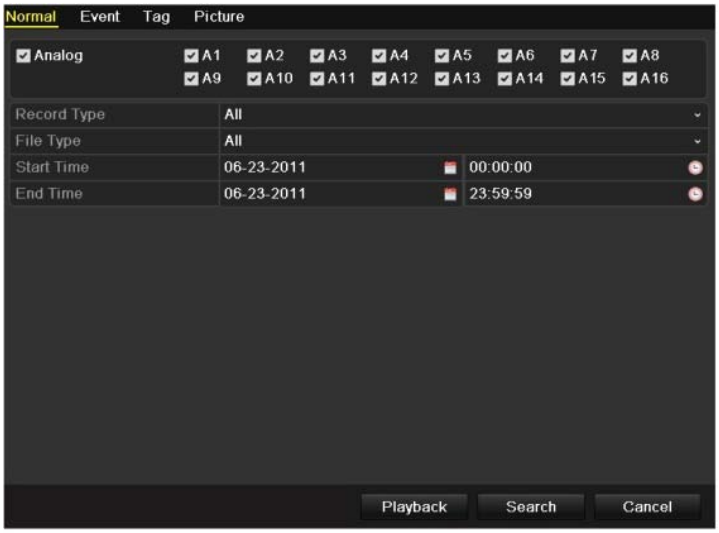

Figure 6.6 Video Search by Time

In the Playback interface:

The toolbar in the bottom part of Playback interface can be used to control playing process, as shown in Figure 6.7.

Figure 6.7 Interface of Playback by Time

Figure 6.8 Toolbar of Playback by Time

Table 6.2 Detailed Explanation of Playback-by-time Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
/	Audio on/Mute	/	Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
/	Pause reverse play/Reverse play/ Single-frame reverse play	/	Pause playing/Play/Single-frame play		Stop		Speed up
	Video search		Exit		Hide		Progress bar
	Video type bar						

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.1.3 Playing Back by Normal Video Search

Purpose:

Play back video files searched out by restricting recording type and recording time. The video files in the result list are played back sequentially and channel switch is supported. Recording types contain Normal, Motion, Alarm, Motion / Alarm, Motion & Alarm, Manual and All.

Steps:

1. Enter Record File Search interface.

   Menu>Playback

   Set search condition and press Search button to enter the Search Result interface.

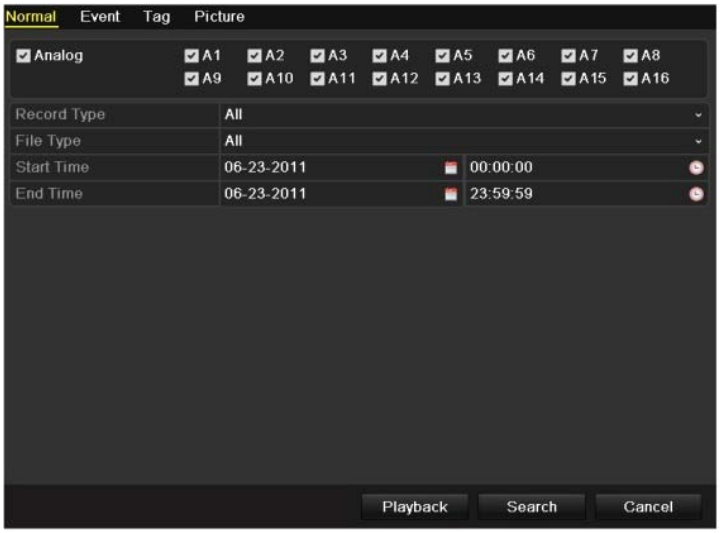

Figure 6.9 Normal Video Search

2. Choose a record file you want to play back.

If there is only one channel in the search result, pressing button takes you to Full-screen Playback interface of this channel.

If more than one channel is optional, pressing button takes you to step 3 and step 4.

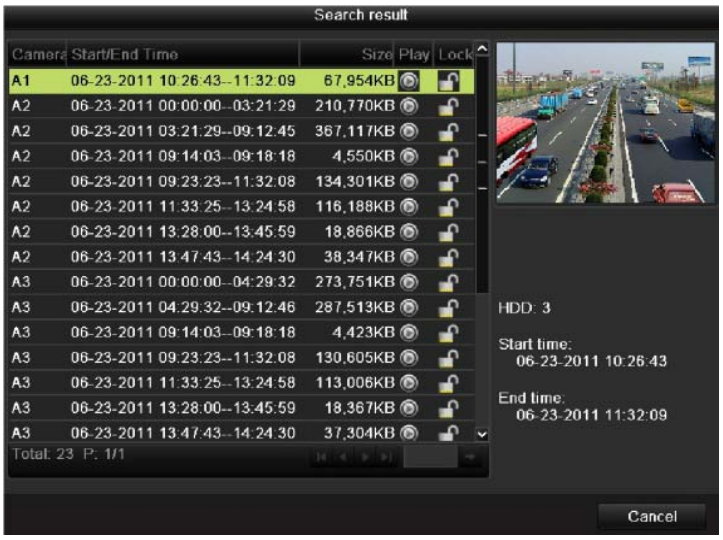

Figure 6.10 Result of Normal Video Search

3. Choose channels for simultaneous playback.

Note: Optional channels for simultaneous playback are the same as the channels chosen to search record files in step 1. And the channel with the recorded file selected in step 2 is the main channel during multi-channel playback and it is displayed at the upper left corner. 4-ch, 8-ch and 16-ch devices support 4-ch, 8-ch and 16-ch simultaneous playback respectively.

Figure 6.11 Select Channels for Synchronous Playback

4. Synchronous Playback interface.

The toolbar in the bottom part of Playback interface can be used to control playing process.

Figure 6.12 4-ch Synchronous Playback Interface

The hidden list of recorded files displays by moving the mouse to the right of the playback interface.

Figure 6.13 4-ch Synchronous Playback Interface with Video List

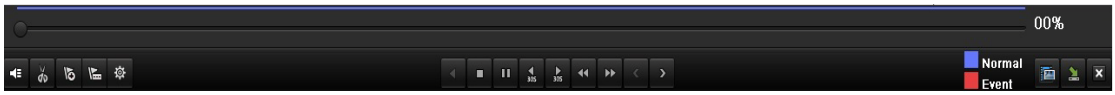

Figure 6.14 Toolbar of Normal Playback

Table 6.3 Detailed Explanation of Normal-playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
/	Audio on/Mute	/	Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
/	Pause reverse play/Reverse play/ Single-frame reverse play	/	Pause playing/Play/Single-frame play		Stop		Speed up
	Previous file		Next file		Video search		Exit
	Hide toolbar		Progress bar		Video type bar		

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.1.4 Playing Back by Event Search

Purpose:

Play back record files on one or several channels searched out by restricting event type (e.g. alarm input and motion detection). Channel switch is supported.

Steps:

1. Enter the playback interface.

   Menu>Playback

2. Select Event tab to enter the Event Playback interface.
3. Select **Alarm Input** as the event type.
4. Click **Search** button to enter the Search Result interface.

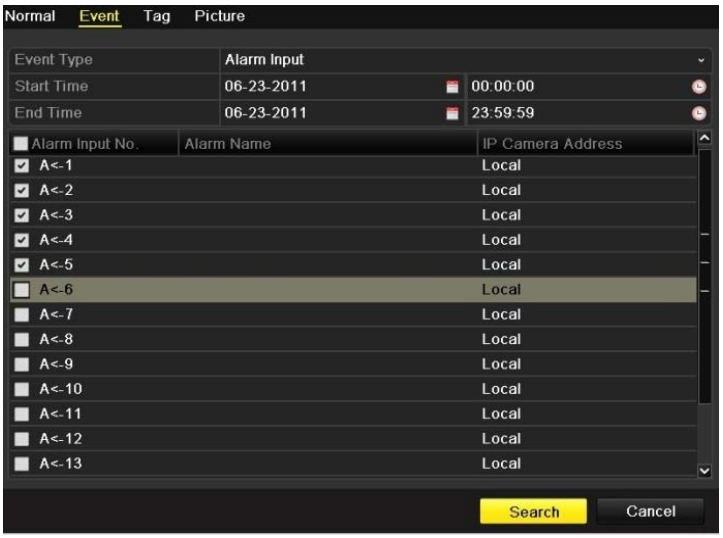

Figure 6.15 Video Search by Alarm Input

If you want to play back recorded files associated with motion detection, choose **Motion** as event type and click **Search** button to enter the Search Result interface.

Figure 6.16 Video Search by Motion

5. Click button to enter the Playback interface.

   If there is only one channel is triggered by an alarm input, pressing button takes you to Full-screen Playback interface of this channel.

   If several channels are triggered, pressing button takes you to step 7 and then step 8.

   Note: Pre-play and post-play can be configured.

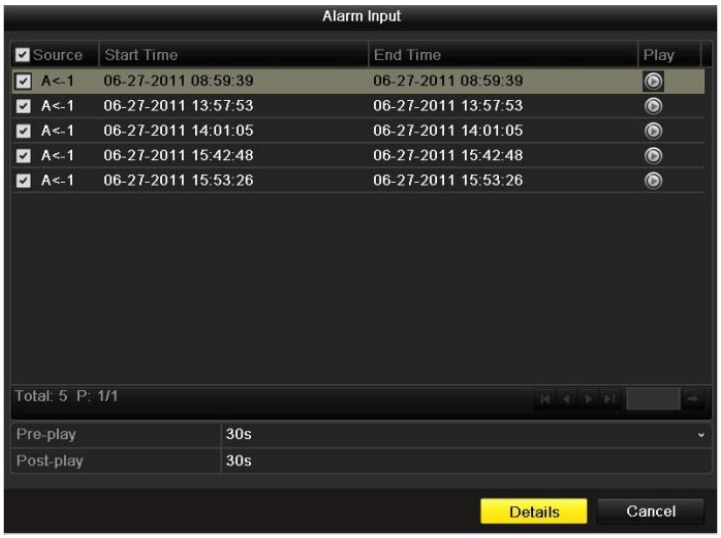

Figure 6.17 Result of Video Search by Alarm Input

6. Click **Details** button to view detailed information of the record file, e.g. start time, end time, file size, etc.

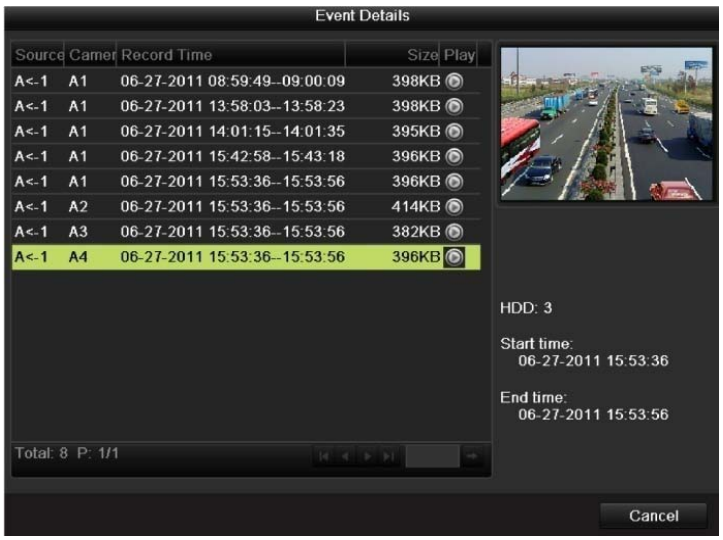

Figure 6.18 Event Details Interface

7. Playback interface.

The toolbar in the bottom part of Playback interface can be used to control playing process.

Figure 6.19 Interface of Playback by Event

The hidden list of events will be displayed by moving the mouse to the right of the playback interface.

Figure 6.20 Playback Interface with Alarm Input List

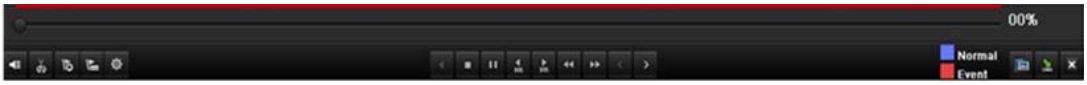

Figure 6.21 Toolbar of Playback by Event

Table 6.4 Detailed Explanation of Playback-by-event Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
/	Audio on/Mute	/	Start/Stop clipping	30S	30s forward	30S	30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
/	Pause reverse play/Reverse play/ Single-frame reverse play	/	Pause playing/Play/Single-frame play		Stop		Speed up

	Previous event		Next event		Event search		Exit
	Hide		Progress bar		Video type bar		

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.1.5 Playing Back by Tag

Purpose:

Video tag allows you to record related information like people and location of a certain time point during playback. You are also allowed to use video tag(s) to search for record files and position time point.

Before playing back by tag:

1. Enter Playback interface.

Figure 6.22 Interface of Playback by Time

Press button to add default tag.

Press button to add customized tag and input tag name.

Note: Max. 64 tags can be added to a single video file.

2. Tag management.

Press button to check, edit and delete tag(s).

Figure 6.23 Tag Management Interface

Steps:

1. Enter Playback interface.

   Menu>Playback

   Press **Tag** tab to enter Playback by Tag interface.

   Choose channels, tag type and time, and press Search to enter Search Result interface.

   Note: Two tag types are selectable: *All* and *Tag Keyword*. Input keyword if you choose *Tag Keyword*.

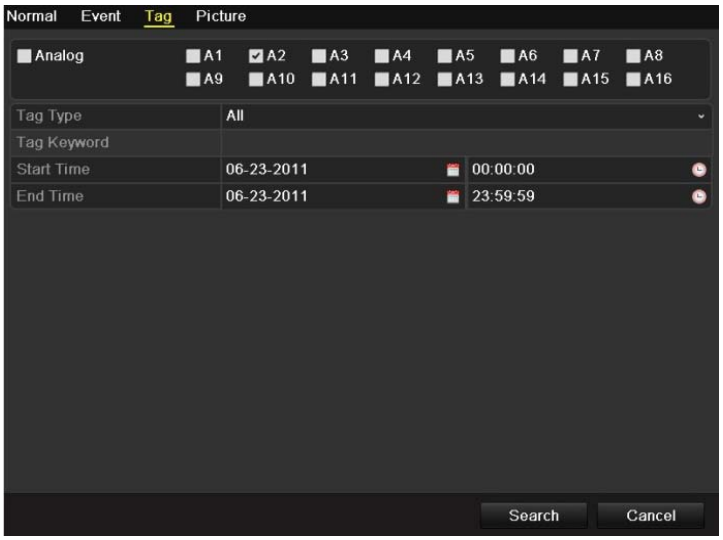

Figure 6.24 Video Search by Tag

2. Set playback conditions and tag management.

   Choose the tag name of the recorded file you want to play back; it can be edited or deleted.

   Pre-play and post-play time can be set according to actual needs.

   Note: Pre-play time and post-play time is added to the time point of the tag.

Figure 6.25 Result of Video Search by Tag

3. Playback by tag.

Choose a tag and press button to play back the related record file.

Figure 6.26 Interface of Playback by Tag

The hidden list of tags will be displayed by moving the mouse to the right of the playback interface.

Figure 6.27 Interface of Playback by Tag with Video List

Figure 6.28 Toolbar of Playback by Tag

Table 6.5 Detailed Explanation of Playback-by-tag Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
/	Audio on/Mute	/	Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow down
/	Pause reverse play/Reverse play/ Single-frame reverse play	/	Pause playing/Play/Single-frame play		Stop		Speed up
	Previous tag		Next tag		Tag search		Exit
	Hide		Progress bar		Video type bar		

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: represents normal recording (manual or schedule); represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.1.6 Playing Back by System Log

Purpose:

Play back record file(s) associated with channels after searching system logs.

Steps:

1. Enter Log Search interface.

Menu>Maintenance>Log Search

Set search time and type and press Search button.

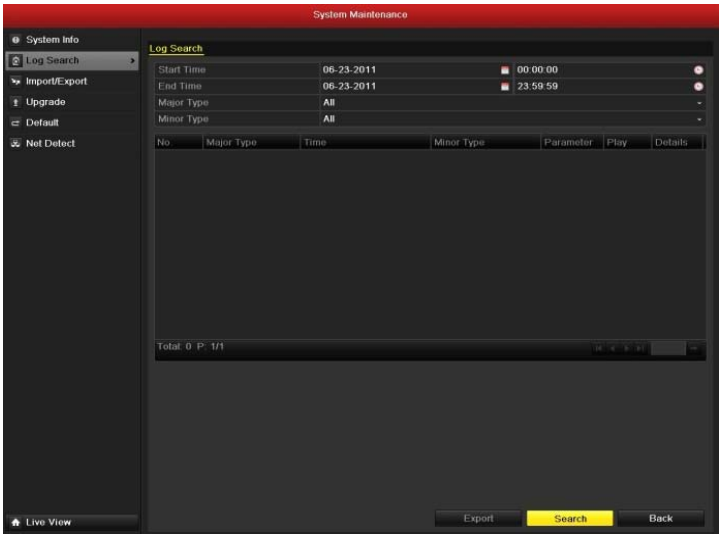

Figure 6.29 System Log Search Interface

2. Choose a log with record file and press button to enter Playback interface.

Note: If there is no record file at the time point of the log, the message box “no related record file” will pop up.

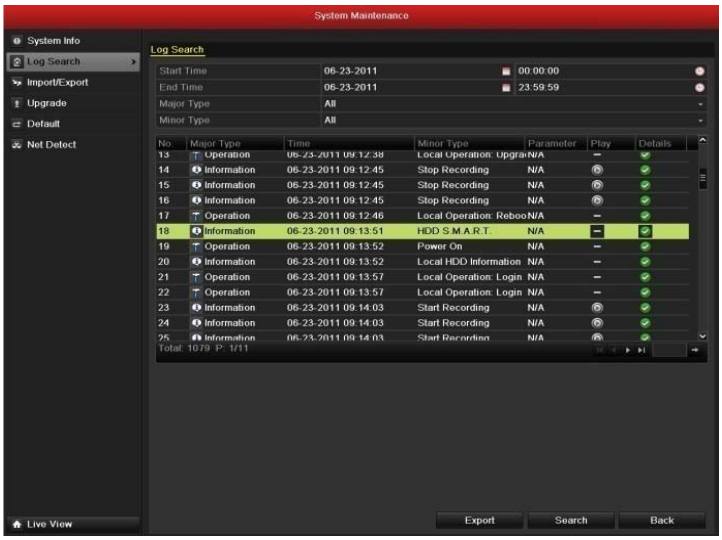

Figure 6.29 Result of System Log Search

3. Playback interface.

The toolbar in the bottom part of Playback interface can be used to control playing process.

Figure 6.30 Interface of Playback by Log

6.2 Auxiliary Functions of Playback

6.2.1 Playing Back Frame by Frame

Purpose:

Play video files frame by frame, in order to check image details of the video when abnormal events happen.

Steps:

- **Using a Mouse:**
  Go to Playback interface and click button and until the speed changes to *Single* frame. One click on the playback screen represents playback or adverse playback of one frame. It is also feasible to use button in toolbar.
- **Using the Front Panel:**
  Rotate the inner control on Jog Shuttle counterclockwise or press the button to set the speed to *Single* frame. One click on button represents playback or adverse playback of one frame.

6.2.2 Smart Search

Purpose:

In order to locate motion detection event easily and accurately in the playback progress bar, you are allowed to analyze a certain area (scene) dynamically, and to get all of the related motion detection events that occurred in this area.

Steps:

1. Go to Playback interface and play the video.

Figure 6.31 Interface of Playback by Time

2. Right-click mouse and select Smart Search to go to analysis area selection interface.

Figure 6.32 Right-click Menu under Playback

3. You can press button to set the full screen as target searching area. After drawing area(s), press button to execute smart search in this area.

Note: Multi-area and full-screen searching modes are supported.

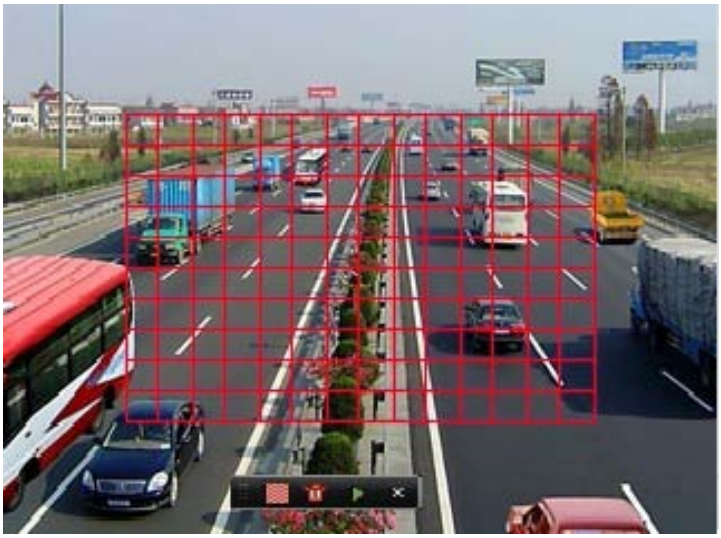

Figure 6.33 Draw Area of Smart Search

Results of intelligent analysis:

Video type bar:

: Normal record file;
: Event record file;
: Dynamic record file.

The hidden list of record files display when moving the mouse to the right of the playback interface.

Figure 6.34 Smart Search Result with Video List

Figure 6.35 Toolbar of Smart Search Playback

Table 6.6 Detailed Explanation of Smart-search-playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
/	Audio on/Mute	/	Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow down
/	Pause reverse play/Reverse play/ Single-frame reverse play	/	Pause playing/Play/Single-frame play		Stop		Speed up
	Previous smart search result		Next smart search result		Video search		Exit
	Hide		Progress bar		Video type bar		Smart search bar

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.2.3 Digital Zoom

Steps:

1. Right click the mouse on a channel under playback and choose Digital Zoom to enter Digital Zoom

interface.

2. Move the red rectangle and the image within it will be quadrupled.

Figure 6.36 Draw Area for Digital Zoom

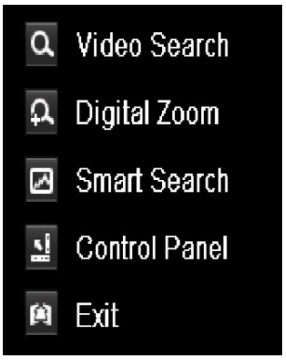

Figure 6.37 Right-click Menu under Playback

The right-click menu:

Note: This menu differs slightly from one playback interface to another.

Table 6.7 Detailed Explanation of Right-click Menu under Playback

Button	Function
	Return to Search interface
	Enter Digital Zoom interface
	Motion Analysis against a specified area
	Show & hide control interface
	Return to Playback interface

6.3 Picture Playback

Purpose:

Search and view captured pictures stored in HDD.

Steps:

1. Enter Playback interface.

   Menu>Playback

2. Choose **Picture** tab.

   Set channel, picture type and time and press **Search** button to enter Search Result interface.

   Note: Picture types include Normal, Motion, Alarm, Motion / Alarm, Motion & Alarm, Capture and Continuous Capture.

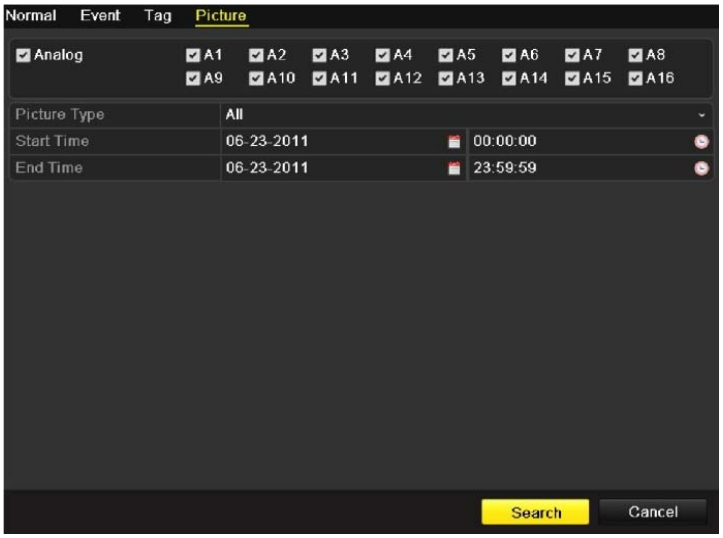

Figure 6.38 Picture Search

3. View pictures.

   Choose a picture you want to view and press button .

Figure 6.39 Result of Picture Search

4. Picture Playback interface.

The toolbar in the bottom part of Playback interface can be used to control playing process.

Figure 6.40 Picture Playback Interface

The hidden list of captured pictures will be displayed by moving the mouse to the right of the playback interface.

Figure 6.41 Playback Interface with Picture List

Figure 6.42 Picture Playback Toolbar

Table 6.8 Detailed Explanation of Picture-playback Toolbar

Button	Function	Button	Function	Button	Function	Button	Function
	Play reverse		Play		Previous picture		Next picture
	Picture search		Hide		Exit		

C H A P T E R 7

Backup

7.1 Backing up Record Files

7.1.1 Quick Export

Purpose:

Export record files to backup device(s) quickly.

Steps:

1. Enter Video Export interface.

Choose the channel(s) you want to back up and press **Quick Export** button.

Note:

1. The time duration of record files on a specified channel cannot exceed one day. Otherwise, the message box “Max. 24 hours are allowed for quick export.” will pop up.
2. The number of channels for synchronous export cannot exceed 4. Otherwise, the message box “Max. 4 channels are allowed for synchronous quick export.” will pop up.

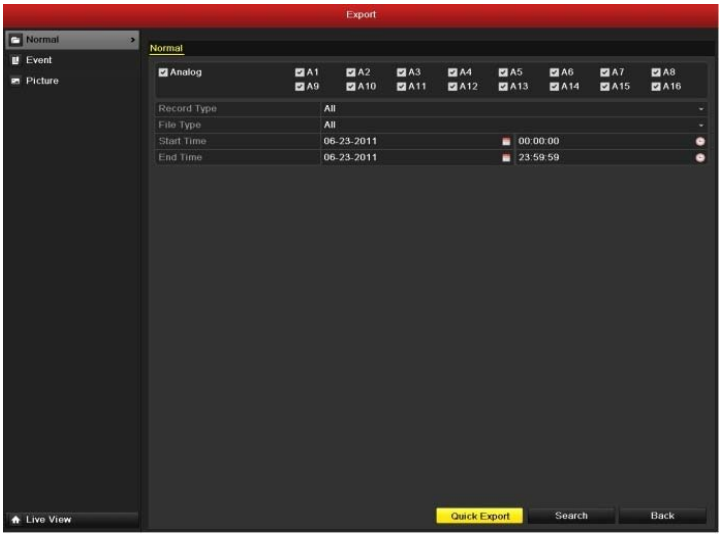

Figure 7.1 Quick Export Interface

2. Export.

Go to Export interface, choose backup device and press **Export** button to start exporting.

Note: Here we use USB Flash Drive and please refer to the next section Normal Backup for more backup devices supported by the device.

Figure 7.2 Quick Export using USB1-1

Stay in the Exporting interface until all record files are exported.

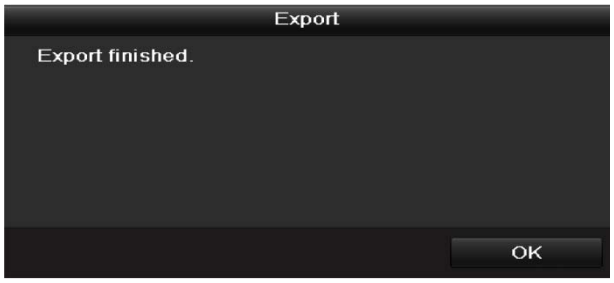

Figure 7.3 Export Finished

3. Check backup result.

Choose the record file in Export interface and press button to check it.

Note: The Player player.exe will be exported automatically during record file export.

Figure 7.4 Checkup of Quick Export Result Using USB1-1

7.1.2 Backing up by Normal Video Search

Purpose:

The record files can be backup to various devices, such as USB devices (USB flash drives, USB HDDs, USB writer), SATA writer and e-SATA HDD.

Backup using USB flash drives and USB HDDs

Steps:

1. Enter Export interface.

   Menu>Export>Normal

2. Set search condition and press **Search** button to enter the search result interface.

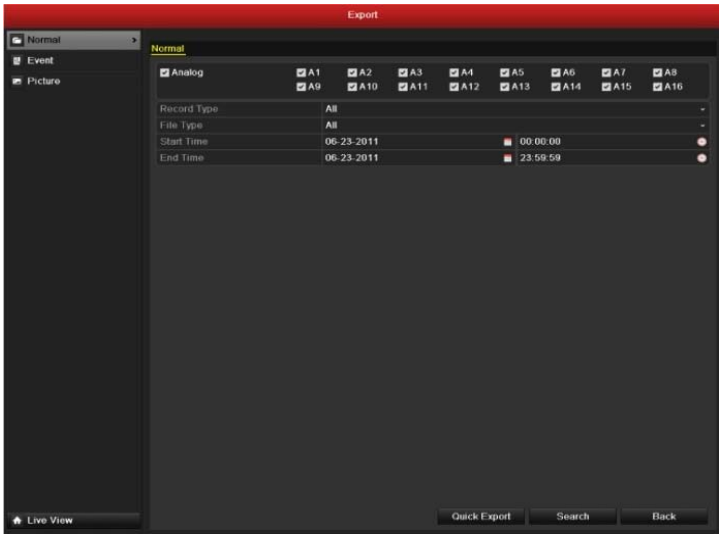

Figure 7.5 Normal Video Search for Backup

3. Select record files you want to back up.

   Press button to play the record file if you want to check it.

   Check the checkbox before the record files you want to back up.

   Note: The size of the currently selected files is displayed in the lower-left corner of the window.

Figure 7.6 Result of Normal Video Search for Backup

4. Export.

Click **Export** button and start backup.

Note: If the inserted USB device is not recognized:

- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

You can also format USB flash drives or USB HDDs via the device.

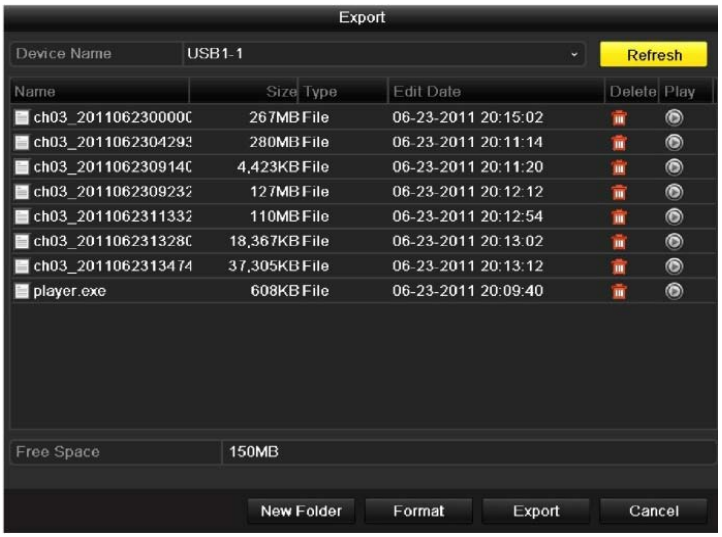

Figure 7.7 Export by Normal Video Search using USB Flash Drive

Stay in the Exporting interface until all record files are exported with pop-up message box“Export finished”.

Figure 7.8 Export Finished

5. Check backup result.

Choose the record file in Export interface and press button to check it.

Note: The Player player.exe will be exported automatically during record file export.

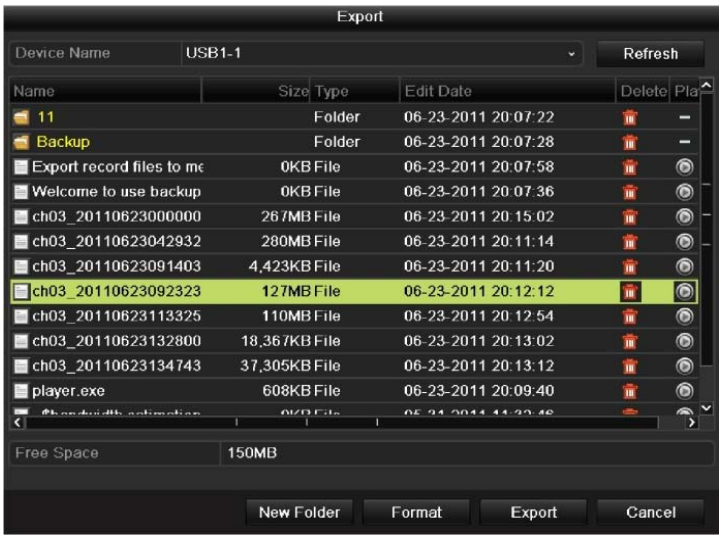

Figure 7.9 Checkup of Export Result using USB Flash Drive

Backup using USB writer and SATA writer

Steps:

1. Enter Export interface.

   Menu>Export>Normal

2. Set search condition and press Search button to enter the search result interface.

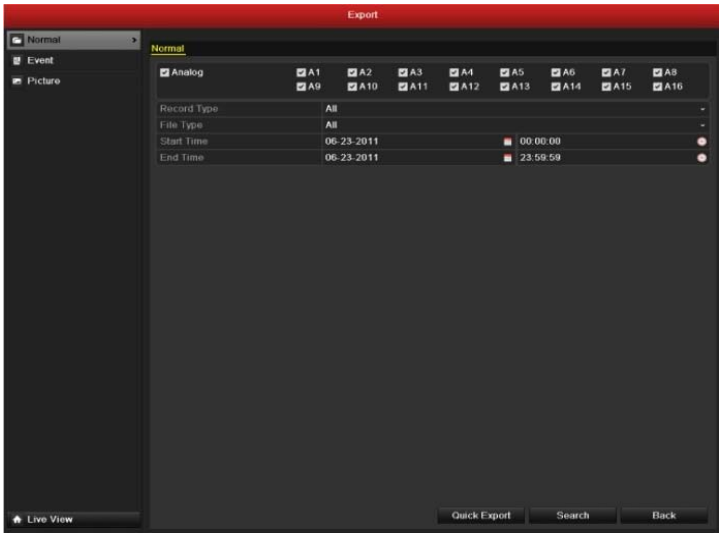

Figure 7.10 Normal Video Search for Backup

3. Select record files you want to back up.

   Press button to play the record file if you want to check it.

   Check the checkbox before the record files you want to back up.

   Note: The size of the currently selected files is displayed in the lower-left corner of the window.

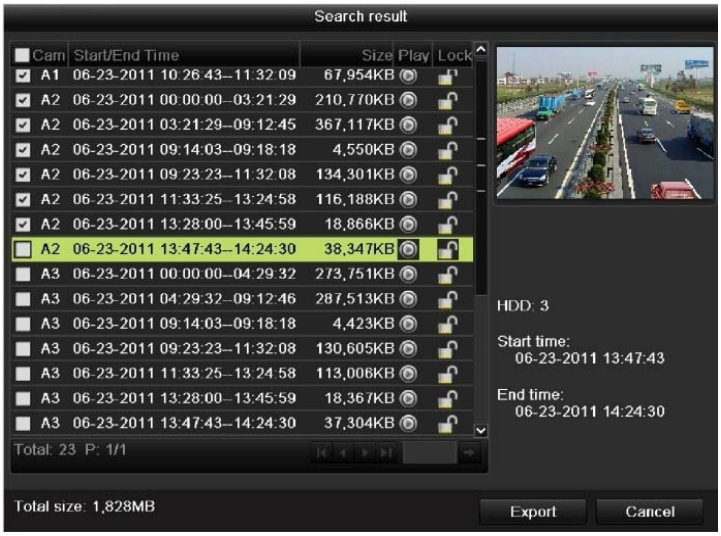

Figure 7.11 Result of Normal Video Search for Backup

4. Export.

Click **Export** button and start backup.

Note: If the inserted USB writer or SATA writer is not recognized:

- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

Figure 7.12 Export by Normal Video Search using USB Writer

Stay in the Exporting interface until all record files are exported with pop-up message box “Export finished”.

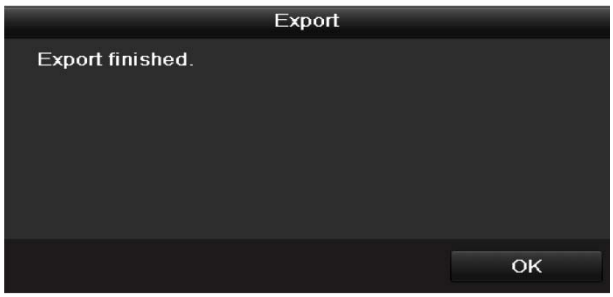

Figure 7.13 Export Finished

5. Check backup result.

Choose the record file in Export interface and press button to check it.

Note: The Player player.exe will be exported automatically during record file export.

Figure 7.14 Checkup of Export Result using USB Writer

Backup using eSATA HDDs

Steps:

1. Enter Record>Advanced and set the working mode of eSATA HDD at “Export”.

   Menu>Record>Advanced

   Choose eSATA and set its mode at Export. Click **Yes** when pop-up message box “System will reboot automatically if the usage of eSATA is changed. Continue?”

   Note: The working modes of eSATA HDD contain Record/Capture and Export. And changes in working mode will take effective after rebooting the device.

2. Enter Export interface.

   Menu>Export>Normal

   Set search condition and press **Search** button to enter the search result interface.

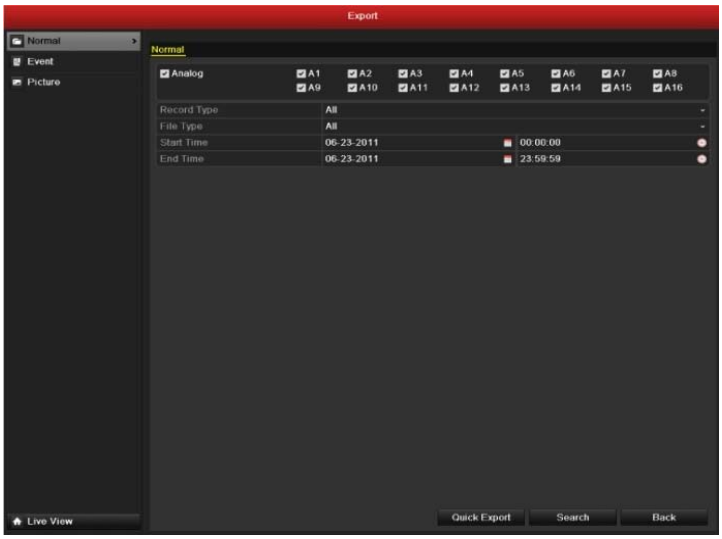

Figure 7.15 Normal Video Search for Backup

3. Select record files you want to back up.

Press button to play the record file if you want to check it.

Tick record files you want to back up.

Note: The size of the currently selected files is displayed in the lower-left corner of the window.

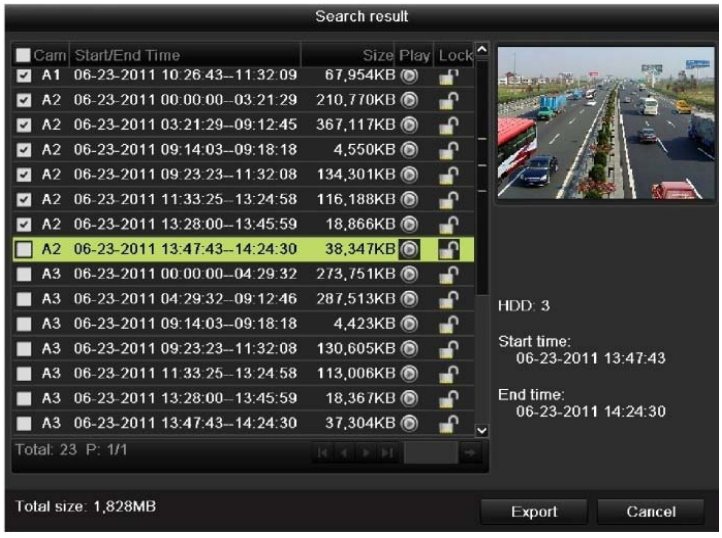

Figure 7.16 Result of Normal Video Search for Backup

4. Export.

Press **Export** button and start backup.

Note: Please format the eSATA first when using it for the first time. If the inserted eSATA HDD is not recognized:

- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

You can also format SATA HDD via the device.

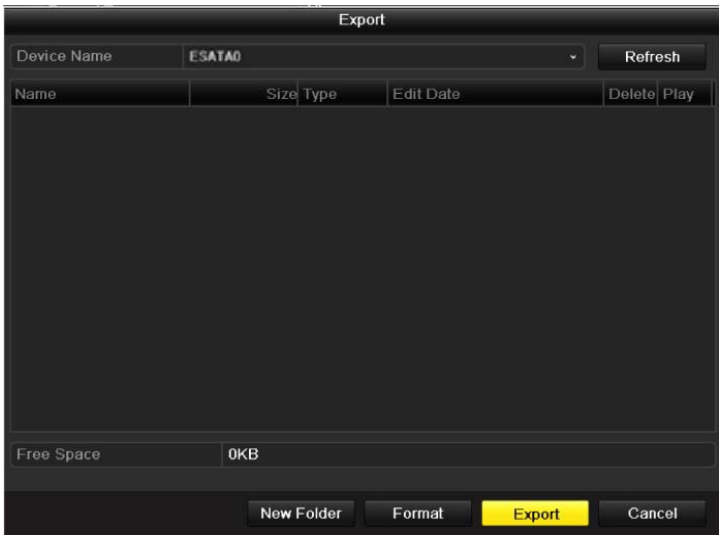

Figure 7.17 Export by Normal Video Search Using eSATA HDD

Stay in the Exporting interface until all record files are exported with pop-up message “Export finished”.

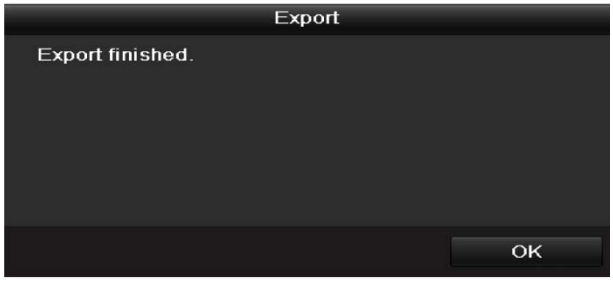

Figure 7.18 Export Finished

5. Check backup result.

Choose the record file in Export interface and press button to check it.

Note: The Player player.exe will be exported automatically during record file export.

Figure 7.19 Checkup of Export Result Using eSATA HDD

7.1.3 Backing up by Event Search

Purpose:

Back up event-related record files using USB devices (USB flash drives, USB HDDs, USB writer), SATA writer or e-SATA HDD. Quick Backup and Normal Backup are supported.

Steps:

1. Enter Export interface.

Menu>Export>Event

1) Select “Alarm Input” from the dropdown list of Event Type.
2) Select the alarm input No. and time.
3) Press **Search** button to enter the Search Result interface.

Figure 7.20 Event Search for Backup

2. Select record files to export.

1) Select an alarm input in the list and press **Quick Export** button to enter Export interface.
2) Pressing **Details** button will take you to the interface with detailed information of all channels triggered by the selected alarm input.

Note: Event types contain Alarm Input and Motion.

3) Pressing **Quick Export** button will export record files of all channels triggered by the selected alarm input.

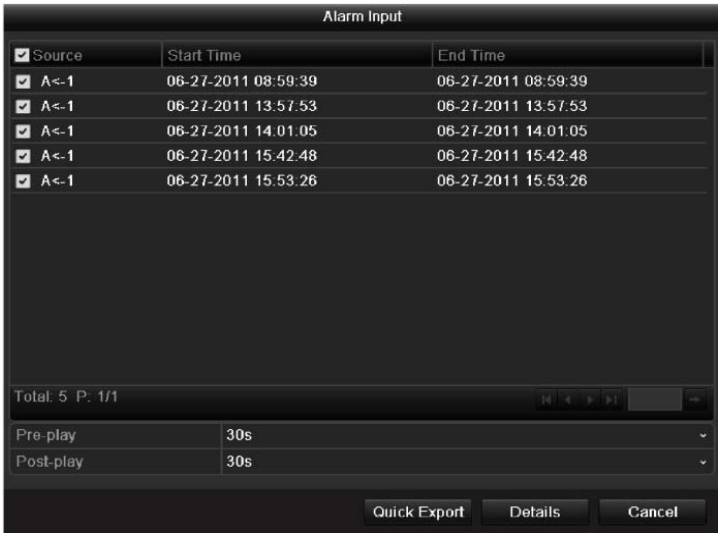

Figure 7.21 Result of Event Search

4) Click Details button to view detailed information of the record file, e.g. start time, end time, file size, etc.

Note: The size of the currently selected files is displayed in the lower-left corner of the window.

Figure 7.22 Event Details Interface

3. Export.

Click the **Export** button and start backup.

Note: If the inserted USB device is not recognized:

- Click the Refresh button.
- Reconnect device.
- Check for compatibility from vendor.

You can also format USB flash drive or USB HDDs via the device.

Figure 7.23 Export by Event Using USB Flash Drive

Stay in the Exporting interface until all record files are exported with pop-up message “Export finished”.

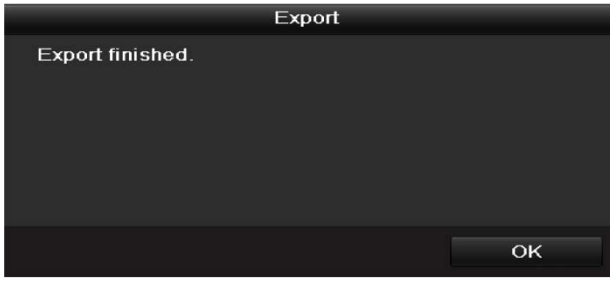

Figure 7.24 Export Finished

4. Check backup result.

Note: The Player player.exe will be exported automatically during record file export.

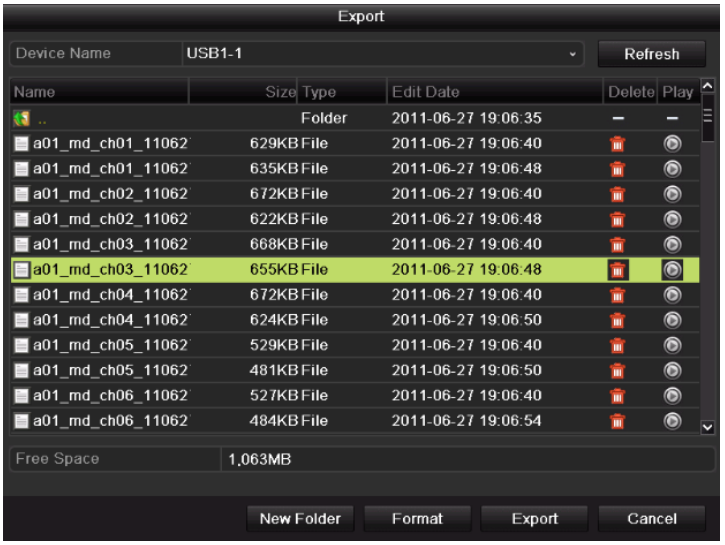

Figure 7.25 Checkup of Event Export Result Using USB Flash Drive

7.1.4 Backing up Video Clips

Purpose:

You may also select video clips to export directly during Playback, using USB devices (USB flash drives, USB HDDs, USB writer), SATA writer or e-SATA HDD.

Steps:

1. Enter Playback interface.
   Please refer to *Chapter 6*.
2. During playback, use buttons and in the playback toolbar to start or stop clipping record file(s).
3. Quit Playback interface after finishing clipping and you will then be prompted to save the clips.
   Note: A maximum of 30 clips can be selected for each channel.

Figure 7.26 Interface of Playback by Time

4. Click **Yes** to save video clips and enter Export interface, or click **No** to quit and do not save video clips.

Figure 7.27 Attention to Video Clip Saving

5. Export.
   Press **Export** button and start backup.
   Note: If the inserted USB device is not recognized:
   - Click the **Refresh** button.
   - Reconnect device.
   - Check for compatibility from vendor.

   You can also format USB flash drive or USB HDDs via the device.

Figure 7.28 Export Video Clips Using USB Flash Drive

Stay in the Exporting interface until all record files are exported with pop-up message "Export finished".

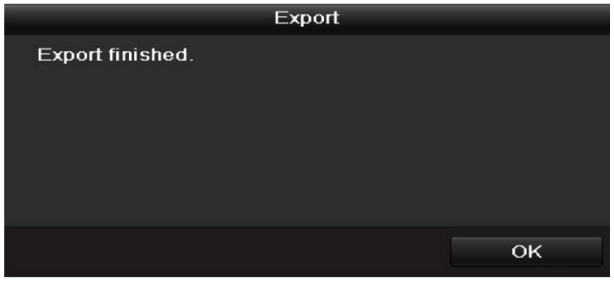

Figure 7.29 Export Finished

6. Check backup result.

Note: The Player player.exe will be exported automatically during record file export.

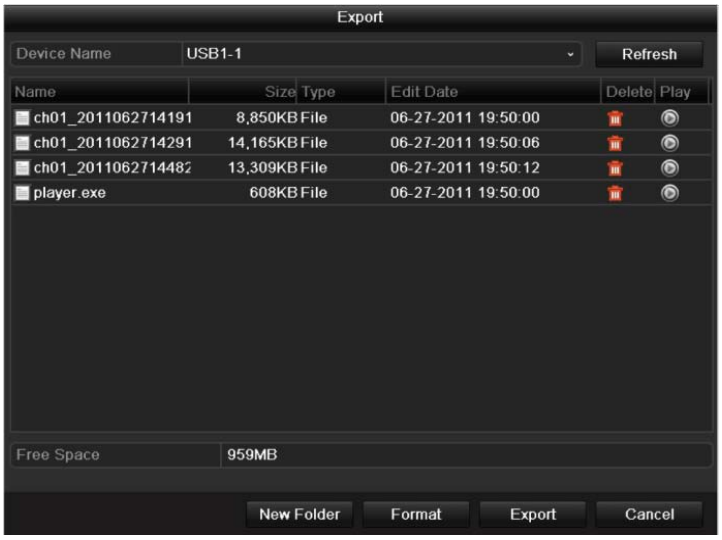

Figure 7.30 Checkup of Video Clips Export Result Using USB Flash Drive

7.2 Backing up Pictures

Purpose:

Back up pictures using USB devices (USB flash drives, USB HDDs, USB writer), SATA writer or e-SATA HDD.

Steps:

1. Enter Export interface.

   Menu>Export>Picture

   Select channel(s), image type, start time and end time, and click **Search** button to enter the Search Result interface.

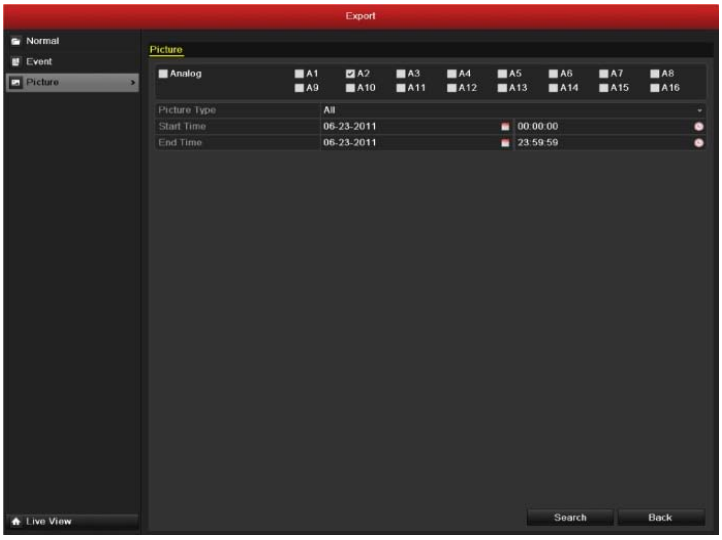

Figure 7.31 Picture Search for Backup

2. Select pictures you want to back up.

   Check the checkbox before the pictures you want to back up and click **Export** button.

   Note: Here we take USB flash drive as an example. For more backup devices, please refer to section Playing Back by Normal Video Search.

Figure 7.32 Result of Picture Search

3. Export.

Press **Export** button and start backup.

Figure 7.33 Export Pictures Using USB Flash Drive

Stay in the Exporting interface until all record files are exported with pop-up message “Export finished”.

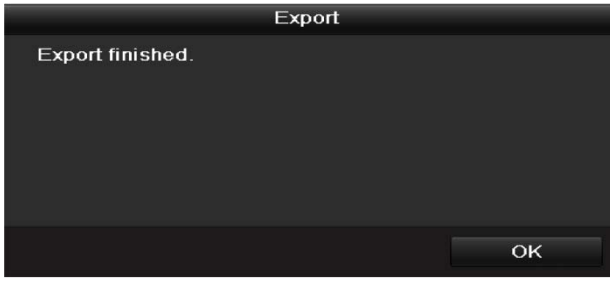

Figure 7.34 Export Finished

4. Check backup result.

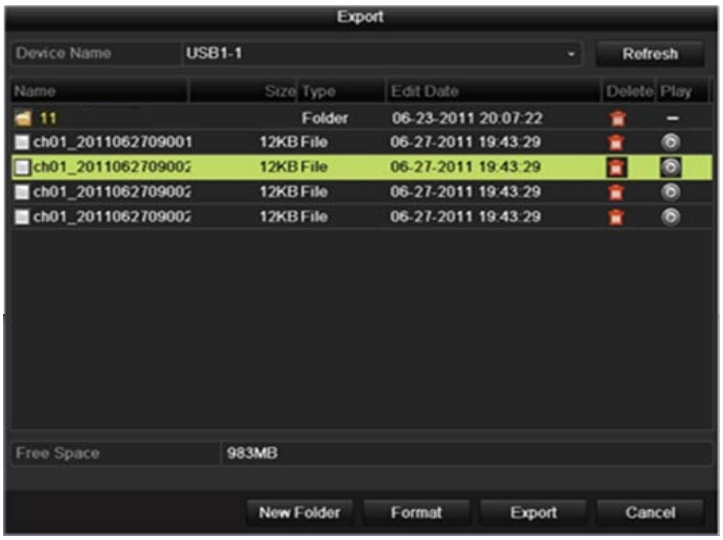

Figure 7.35 Checkup of Picture Export Using USB Flash Drive

7.3 Managing Backup Devices

Management of USB flash drives, USB HDDs and eSATA HDDs.

1. Enter Search Result interface of record files.

   Menu>Export>Normal

   Set search condition and press **Search** button to enter Search Result interface.

   Note: At least one channel shall be selected.

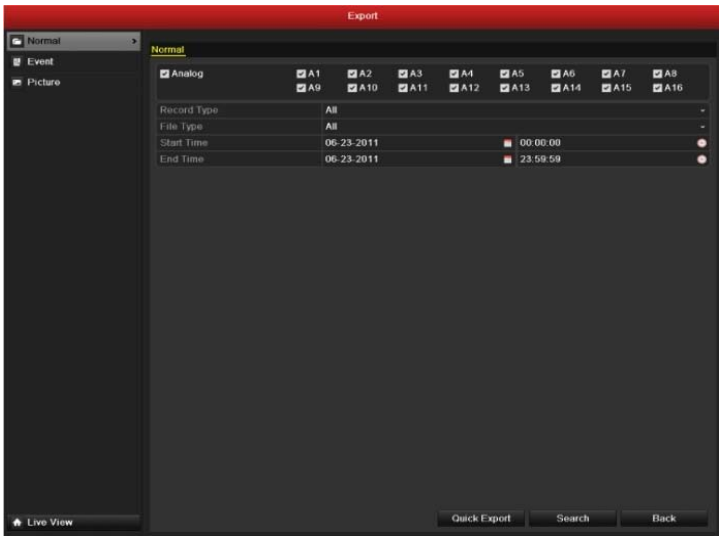

Figure 7.36 Normal Video Search for Backup

2. Select record files you want to back up.

   Press **Export** button to enter Export interface.

   Note: At least one record file shall be selected.

Figure 7.37 Result of Normal Video Search for Backup

3. Backup device management.

   Press **New Folder** button if you want to create a new folder in the backup device.

   Select a record file or folder in the backup device and press button if you want to delete it.

Select a record file in the backup device and press button to play it.

Press **Format** button to format the backup device.

Note: If the inserted USB device is not recognized:

- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

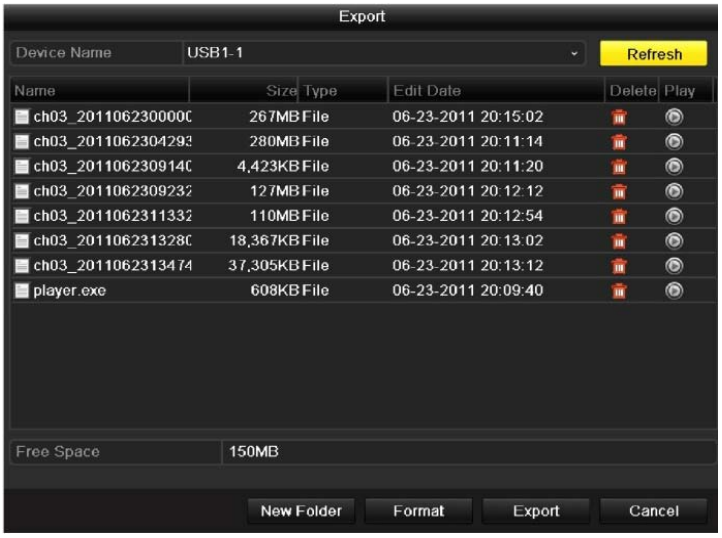

Figure 7.38 USB Flash Drive Management

Management of USB writers and SATA writers

1. Enter Search Result interface of record files.

Menu>Export>Normal

Set search condition and press **Search** button to enter Search Result interface.

Note: At least one channel shall be selected.

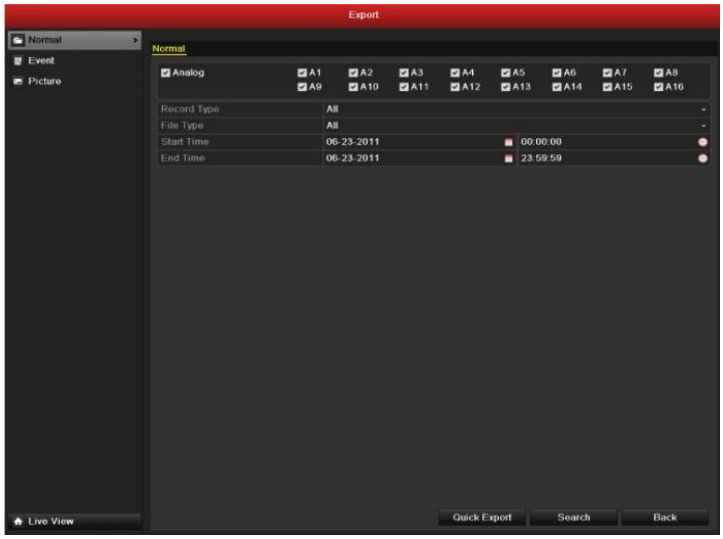

Figure 7.39 Normal Video Search for Backup

2. Select record files you want to back up.

Press **Export** button to enter Export interface.

Note: At least one record file shall be selected.

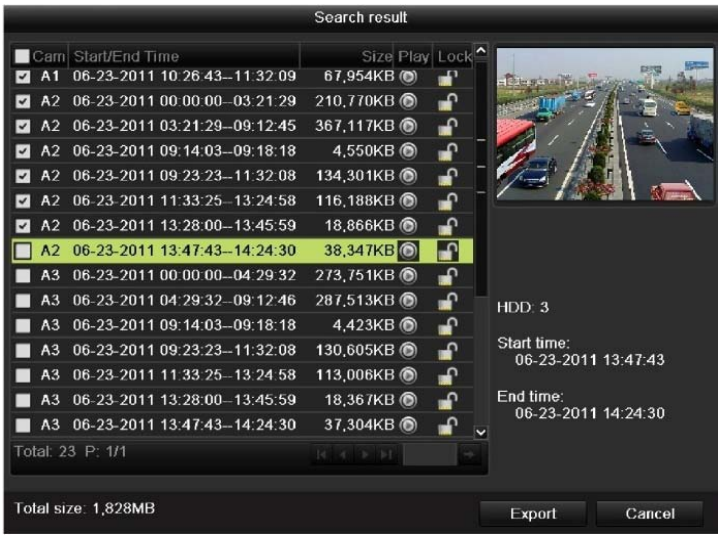

Figure 7. 40 Result of Normal Video Search for Backup

3. Backup device management.

Press **Erase** button if you want to erase the files from a re-writable CD/DVD.

Note: There must be a re-writable CD/DVD when you make this operation.

Note: If the inserted USB writer or SATA writer is not recognized:

- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

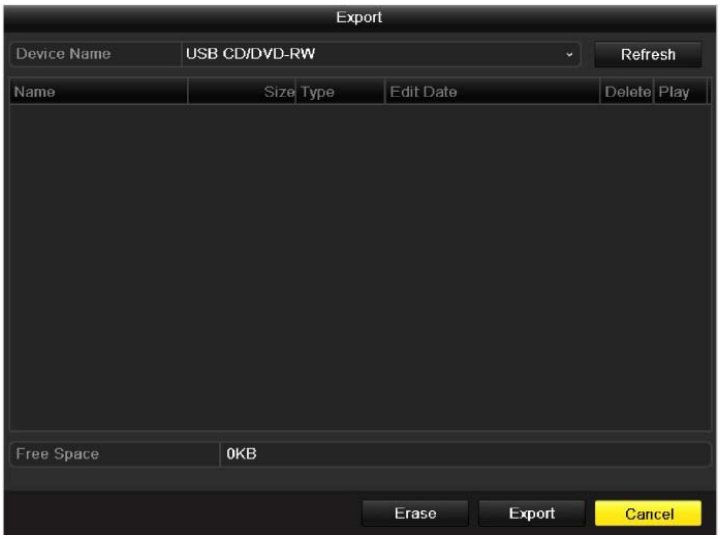

Figure 7.41 USB Writer Management

C H A P T E R 8

Alarm Settings

8.1 Setting up Motion Detection

Steps:

1. Enter Motion Detection interface of Camera Management and choose a camera you want to set up motion detection.

   Menu> Camera> Motion

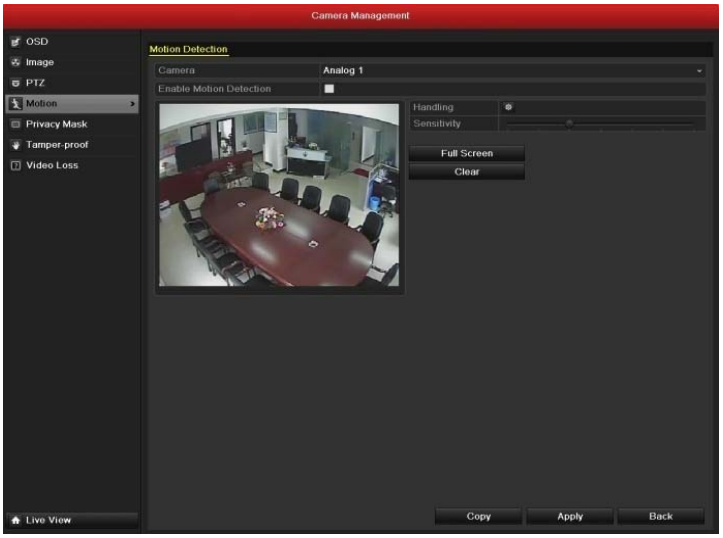

Figure 8.1 Motion Detection Setup Interface

2. Set up detection area and sensitivity.

   Tick “Enable Motion Detection”, use the mouse to draw detection area(s) and drag the sensitivity bar to set sensitivity.

   Press **Handling** button and set alarm response actions.

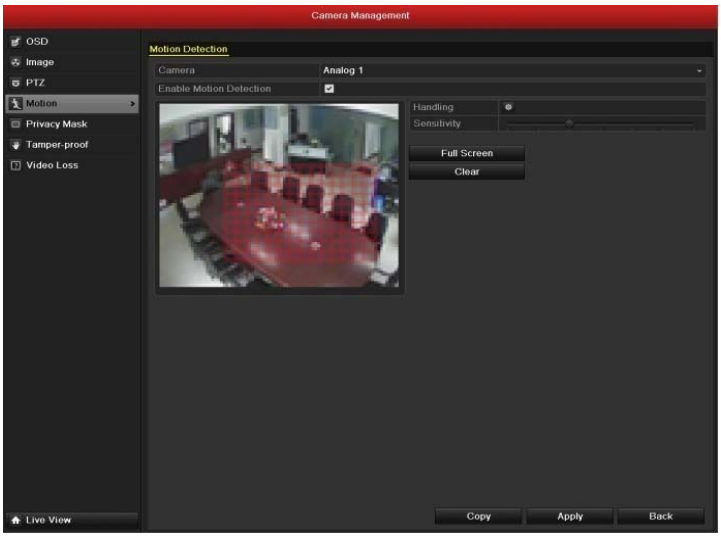

Figure 8.2 Set Detection Area and Sensitivity

3. Click **Trigger Channel** tab and select one or more channels which will start to record/capture or become full-screen monitoring when motion alarm is triggered.

Figure 8.3 Set Trigger Camera of Motion Detection

4. Set up arming schedule of the channel.

Select Arming Schedule tab to set the channel's arming schedule.

Choose one day of a week and up to eight time periods can be set within each day.

Note: Time periods shall not be repeated or overlapped.

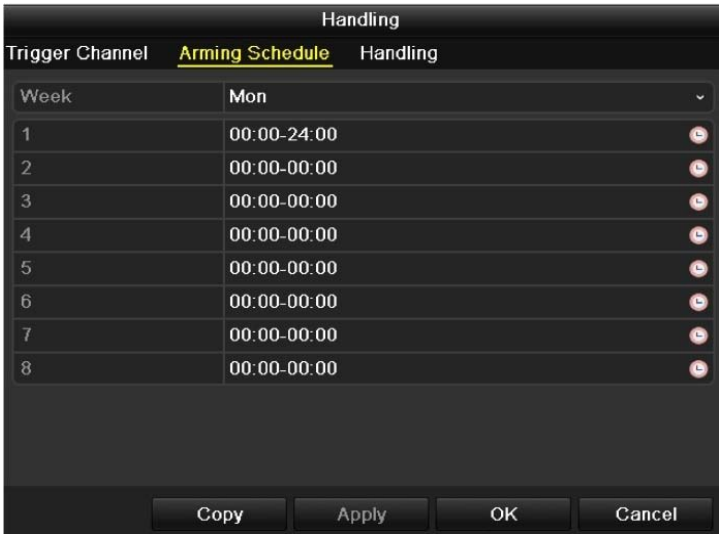

Figure 8.4 Set Arming Schedule of Motion Detection

5. Click **Handling** tab to set up alarm response actions of motion alarm (please refer to *Chapter 8.6*).

Repeat the above steps to set up arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.

Click the **OK** button to complete the motion detection settings of the channel.

6. If you want to set up motion detection for another channel, repeat the above steps or just copy the above settings to it.

Note: You are not allowed to copy the "Trigger Channel" action.

Figure 8.5 Copy Settings of Motion Detection

8.2 Setting up Sensor Alarms

Purpose:

Set up handling method of an external sensor alarm.

Steps:

1. Enter Alarm Settings of System Configuration and select an alarm input.

   Menu> Configuration> Alarm

   Select Alarm Input tab to enter Alarm Input Settings interface.

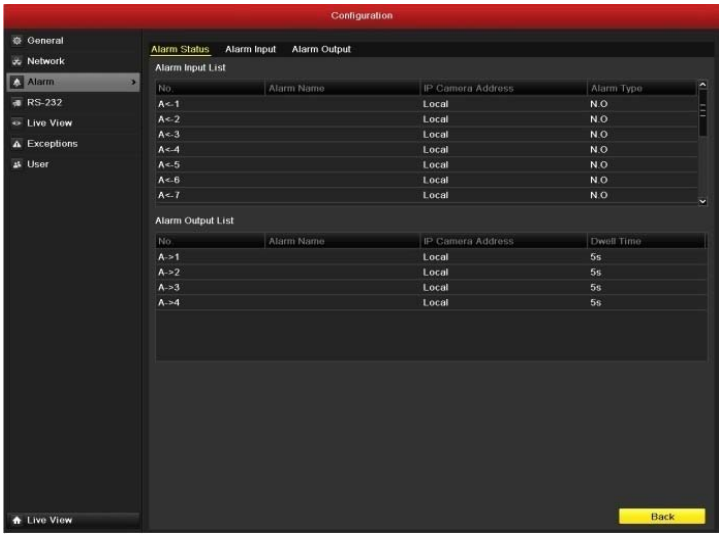

Figure 8.6 Alarm Status Interface of System Configuration

2. Set up the handling method of the selected alarm input.

   Check the **Setting** checkbox and click **Handling** button to set up its alarm response actions.

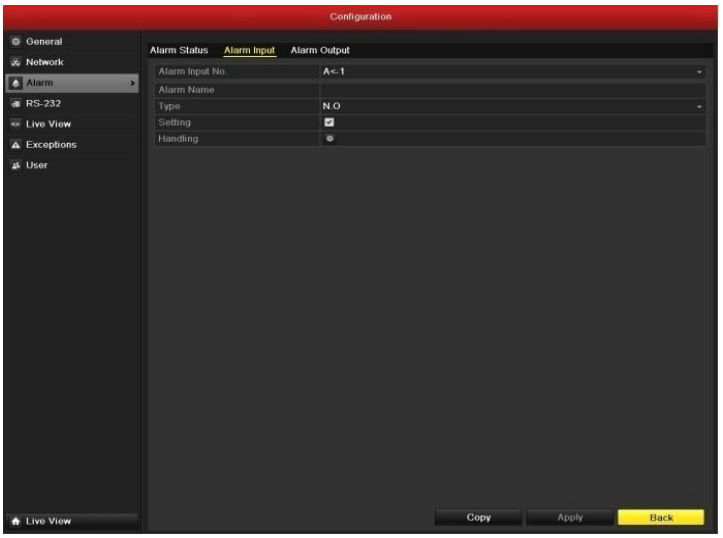

Figure 8.7 Alarm Input Setup Interface

3. Select Trigger Channel tab and select one or more channels which will start to record/capture or become full-screen monitoring when an external alarm is input.
4. Select Arming Schedule tab to set the channel's arming schedule.

   Choose one day of a week and Max. eight time periods can be set within each day.

Note: Time periods shall not be repeated or overlapped.

5. Select Handling tab to set up alarm response actions of the alarm input (please refer to *Chapter 8.6*).

Repeat the above steps to set up arming schedule of other days of a week. You can also use Copy button to copy an arming schedule to other days.

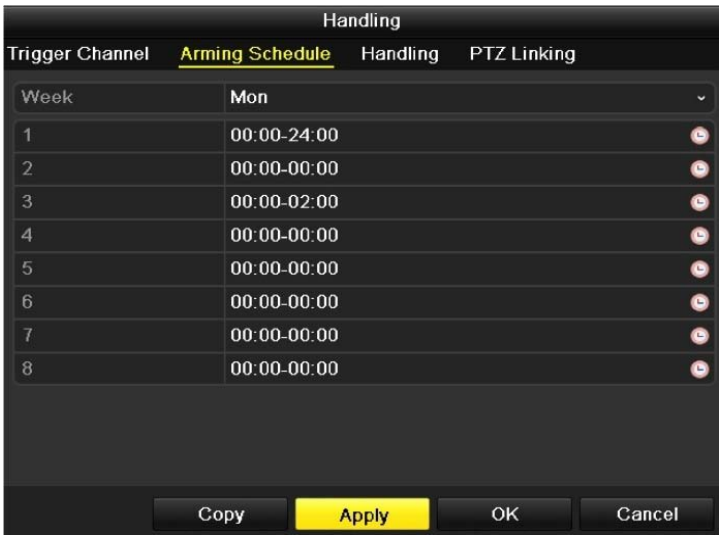

Figure 8.8 Set Arming Schedule of Alarm Input

6. If necessary, select PTZ Linking tab and set PTZ linkage of the alarm input.

Set PTZ linking parameters and press **OK** to complete the settings of the alarm input.

Note: Please check whether the PTZ or speed dome supports PTZ linkage.

One alarm input can trigger presets, patrol or pattern of more than one channel. But presets, patrols and patterns are exclusive.

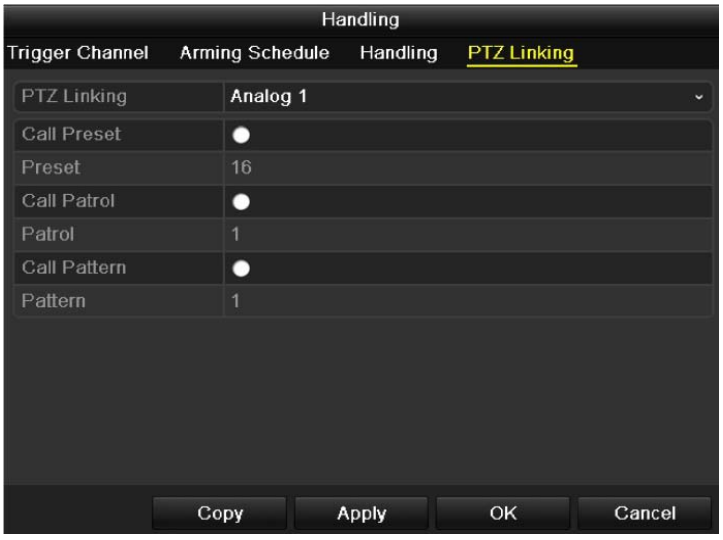

Figure 8.9 Set PTZ Linking of Alarm Input

7. If you want to set handling method of another alarm input, repeat the above steps or just copy the above settings to it.

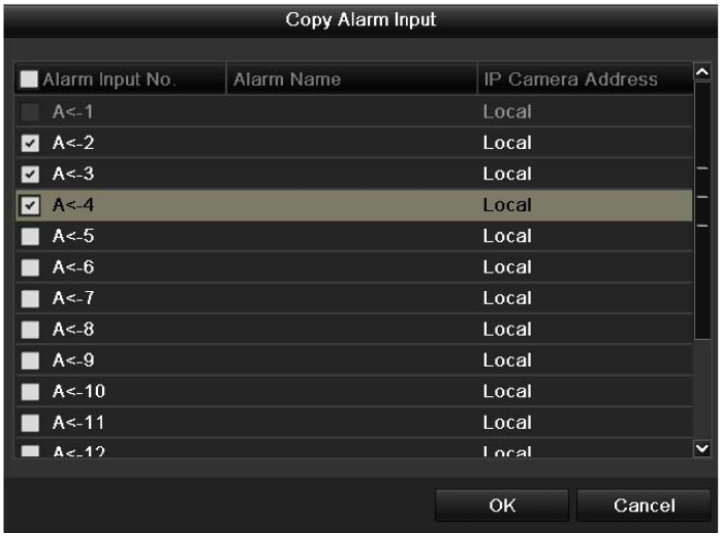

Figure 8.10 Copy Settings of Alarm Input

8.3 Detecting Video Loss

Purpose:

Detect video loss of a channel and take alarm response action(s).

Steps:

1. Enter Video Loss interface of Camera Management and select a channel you want to detect.

Menu> Camera> Video Loss

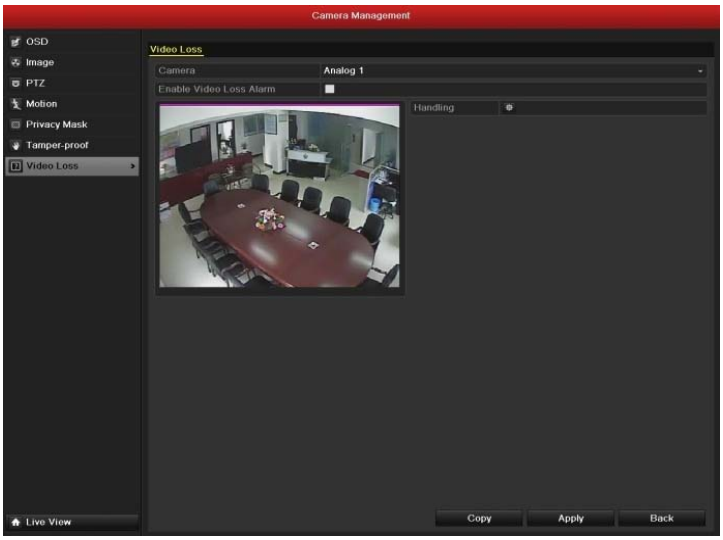

Figure 8.11 Video Loss Setup Interface

2. Set up handling method of video loss.

Check the checkbox of "Enable Video Loss Alarm", and press Handling button to set up handling method of video loss.

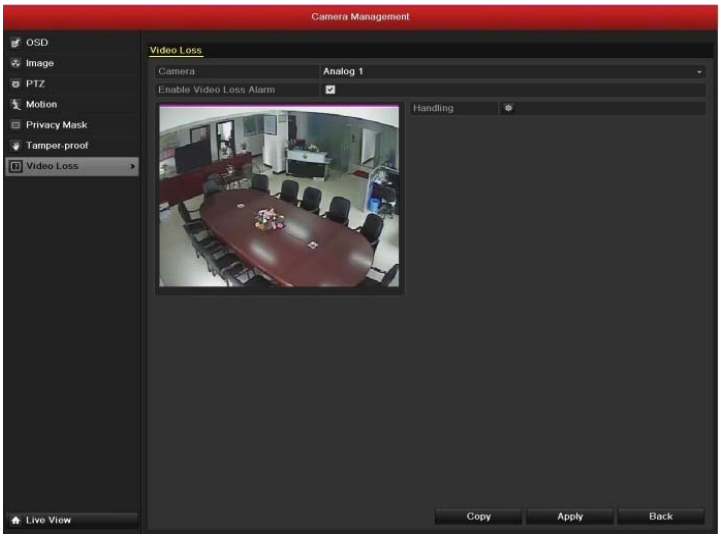

Figure 8.12 Set Handling Method of Video Loss

3. Set up arming schedule of the channel.

Select Arming Schedule tab to set the channel's arming schedule.

Choose one day of a week and up to eight time periods can be set within each day.

Note: Time periods shall not be repeated or overlapped.

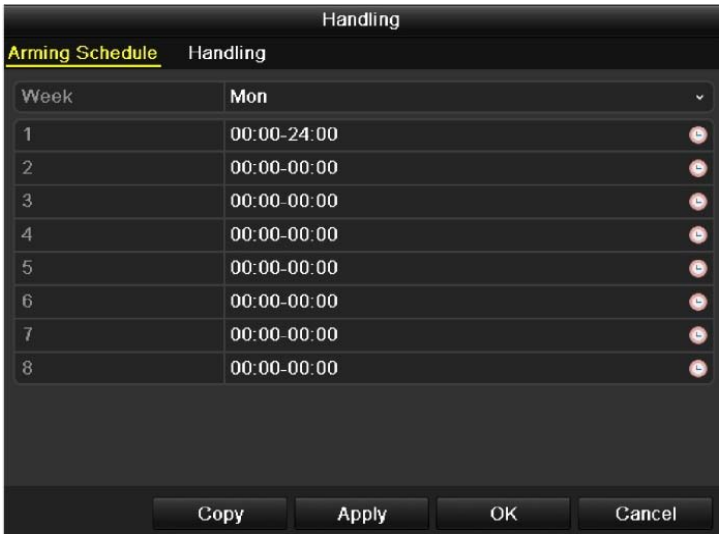

Figure 8.13 Set Arming Schedule of Video Loss

4. Select **Handling** tab to set up alarm response action of video loss (please refer to *Chapter 8.6*).

   Repeat the above steps to set up arming schedule of other days of a week. You can also use Copy button to copy an arming schedule to other days.

   Click the **OK** button to complete the video loss settings of the channel.

5. If you want to set up video loss handling method for another channel, repeat the above steps or just copy the above settings to it.

Figure 8.14 Copy Settings of Video Loss

8.4 Detecting Video Tampering

Purpose:

Trigger alarm when the lens is covered and take alarm response action(s).

Steps:

1. Enter Video Tampering interface of Camera Management and select a channel you want to detect video

tampering.

Menu> Camera> Tamper-proof

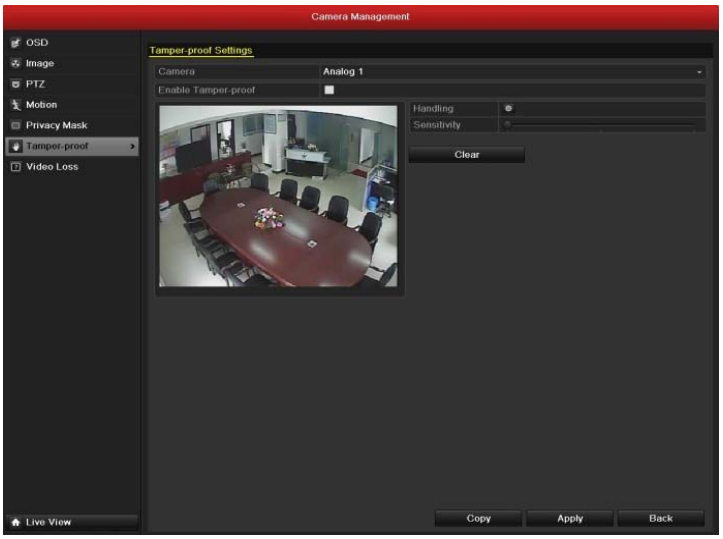

Figure 8.15 Tamper-proof Setup Interface

2. Set up the video tampering handling method of the channel.

Check the checkbox of "Enable Video Tampering".

Drag the sensitivity bar and choose a proper sensitivity level. Use the mouse to draw an area you want to detect video tampering.

Press **Handling** button to set up handling method of video tampering.

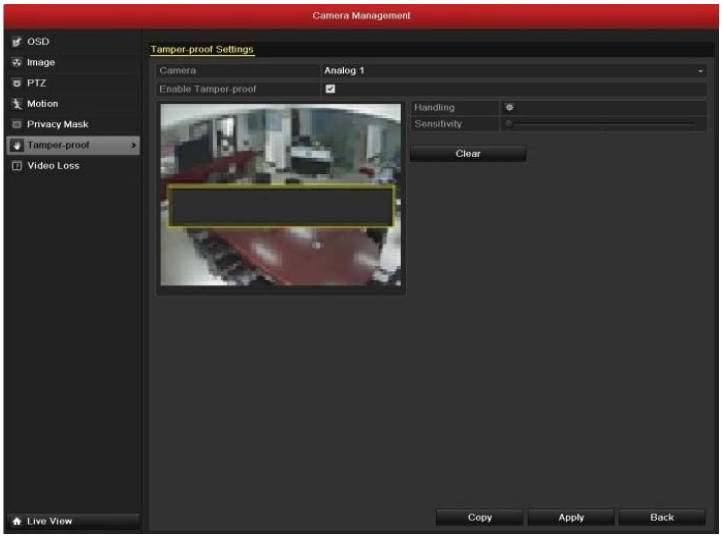

Figure 8.16 Set Detection Area and Sensitivity of Video Tampering

3. Set up arming schedule and alarm response action of the channel.

1) Press Arming Schedule tab to set the channel's arming schedule.

2) Choose one day of a week and Max. eight time periods can be set within each day.

Note: Time periods shall not be repeated or overlapped.

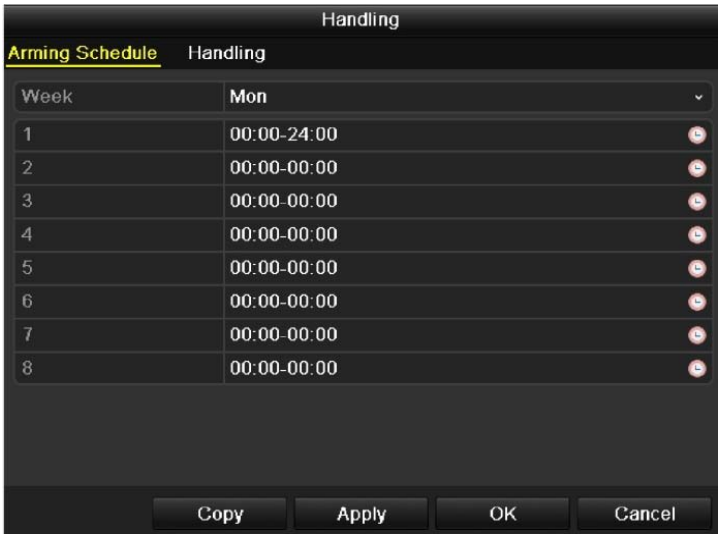

Figure 8.17 Set Arming Schedule of Video Tampering

4. Select **Handling** tab to set up alarm response action of video tampering alarm (please refer to *Chapter 8.6*).

Repeat the above steps to set up arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.

Click the **OK** button to complete the video tampering settings of the channel.

5. If you want to set up video loss handling method for another channel, repeat step two and three, or just copy the above settings to it.

Figure 8.18 Copy Settings of Video Tampering

8.5 Handling Exceptions

Purpose:

Exception settings refer to the handling method of various exceptions, e.g.

- **HDD Full:** The HDD is full.
- **HDD Error:** Writing HDD error or unformatted HDD.
- **Network Disconnected:** Disconnected network cable.
- **IP Conflicted:** Duplicated IP address.
- **Illegal Login:** Incorrect user ID or password.
- **Abnormal Video Signal:** Unstable video signal.
- **Input / Output Video Standard Mismatch:** I/O video standards do not match.
- **Abnormal Record/Capture:** No space for saving recorded files or captured images.

Steps:

Enter Exception interface of System Configuration and handle various exceptions.

Menu> Configuration> Exceptions

Please refer to *Chapter 8.6* for detailed alarm response actions.

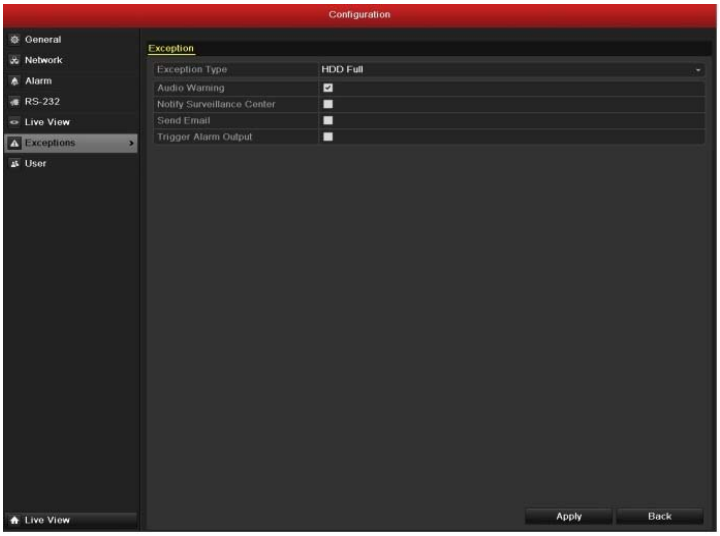

Figure 8.19 Exceptions Setup Interface

8.6 Setting Alarm Response Actions

Purpose:

Take alarm response actions will be activated when an alarm or exception occurs, including Full Screen Monitoring, Audible Warning (buzzer), Notify Surveillance Center, Upload Picture to FTP, Trigger Alarm Output and Send Email.

Full Screen Monitoring

When an alarm is triggered, the local monitor (VGA or BNC monitor) display in full screen the video image from the alarming channel configured for full screen monitoring.

If alarms are triggered simultaneously in several channels, their full-screen images will be switched at an interval of 10 seconds (default dwell time). A different dwell time can be set by going to Manu > Configuration >Live View> Alarm Picture Dwell Time.

Auto-switch will terminate once the alarm stops and you will be taken back to the Live View interface.

Note: You must select during "Trigger Channel" settings the channel(s) you want to make full screen monitoring.

Audible Warning

Trigger an audible *beep* when an alarm is detected.

Notify Surveillance Center

Sends an exception or alarm signal to remote alarm host when an event occurs. The alarm host refers to the PC installed with Remote Client.

Note: The alarm signal will be transmitted automatically at detection mode when remote alarm host is configured. Please refer to *Chapter 9.2.6* for details of alarm host configuration.

Upload Captured Pictures to FTP

Capture the image when an alarm is triggered and upload the picture to a FTP server.

Note: Please set up FTP address and the remote FTP server first.

Email Linkage

Send an email with alarm information to a user or users when an alarm is detected.

Please refer to *Chapter 9.2.10* for details of Email configuration.

Trigger Alarm Output

Trigger an alarm output when an alarm is triggered.

1. Enter Alarm Output interface.

Menu> Configuration> Alarm> Alarm Output

Select an alarm output and set alarm name and dwell time. Press **Schedule** button to set the arming schedule of alarm output.

Note: If "Manually Clear" is selected in the dropdown list of Dwell Time, you can clear it only by going to Menu> Manual> Alarm.

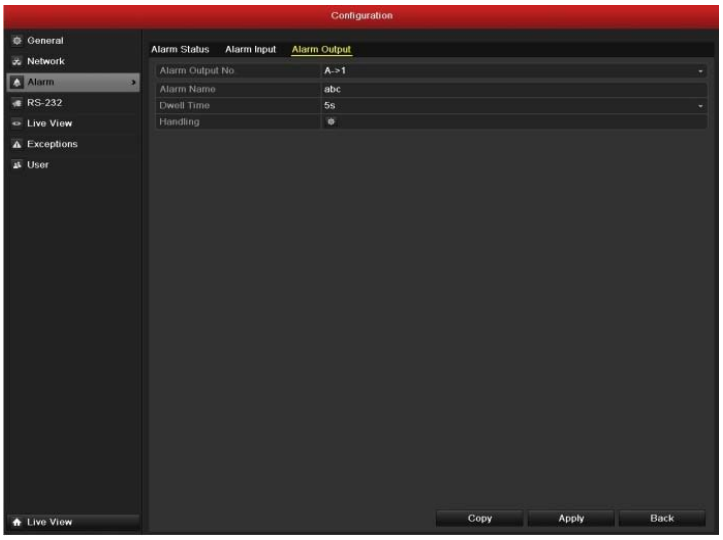

Figure 8.20 Alarm Output Setup Interface

2. Set up arming schedule of the alarm output.

Choose one day of a week and up to 8 time periods can be set within each day.

Note: Time periods shall not be repeated or overlapped.

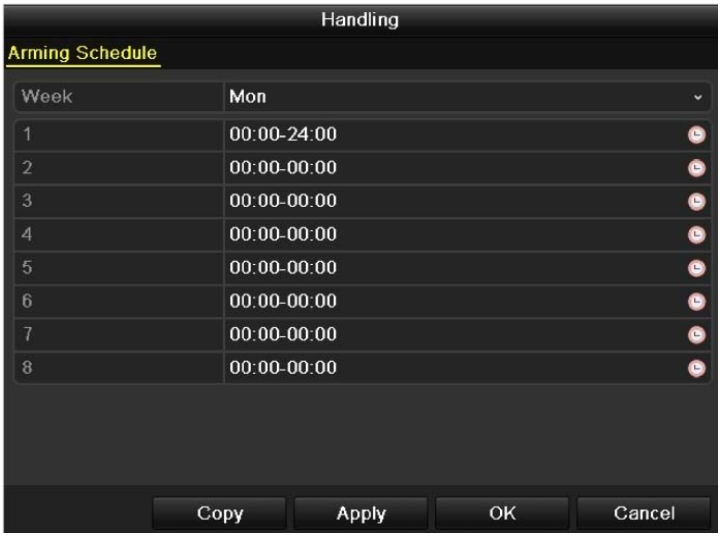

Figure 8.21 Set Arming Schedule of Alarm Output

3. Repeat the above steps to set up arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.

Click the **OK** button to complete the video tampering settings of the channel.

4. You can also copy the above settings to another alarm output No..

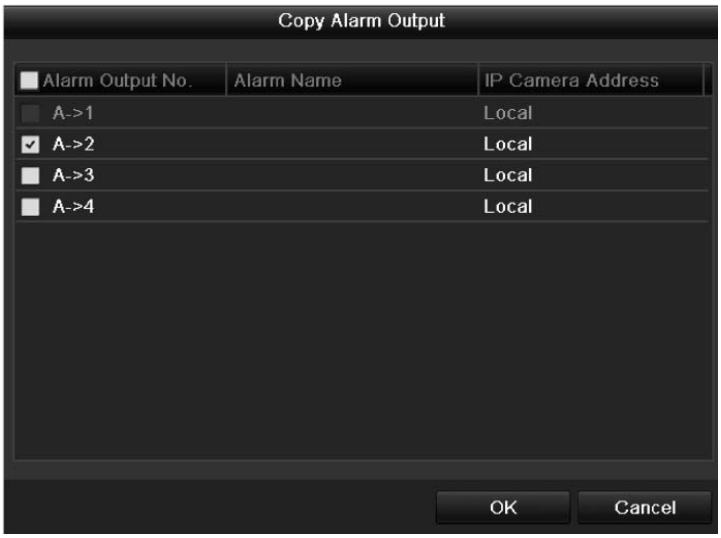

Figure 8.22 Copy Settings of Alarm Output

8.7 Triggering or Clearing Alarm Output Manually

Purpose:

Sensor alarm can be triggered or cleared manually. If “Manually Clear” is selected in the dropdown list of dwell time of an alarm output, the alarm can be cleared only by pressing **Clear** button in the following interface.

Steps:

Select the alarm output you want to trigger or clear and make related operations.

Menu> Manual> Alarm

Press **Trigger/Clear** button if you want to trigger or clear an alarm output.

Press **Trigger All** button if you want to trigger all alarm outputs.

Press **Clear All** button if you want to clear all alarm output.

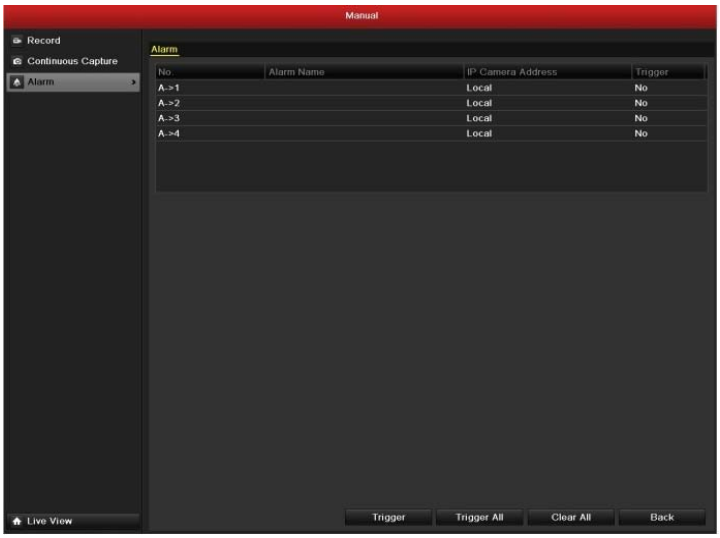

Figure 8.23 Clear or Trigger Alarm Output Manually

C H A P T E R 9

Network Settings

9.1 Configuring General Settings

Purpose:

Network settings must be properly configured before you operate DVR over network.

Steps:

1. Enter the Network Settings interface.

   Menu > Configuration > Network

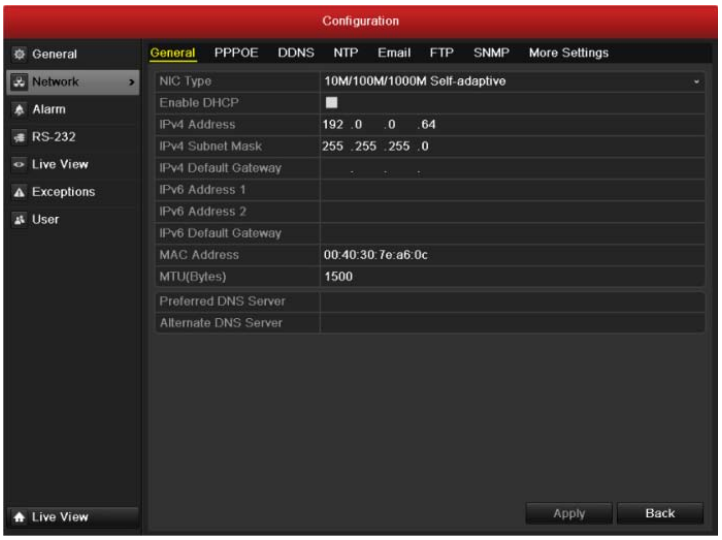

Figure 9.1 Network Settings Interface

2. Select the **General** tab.
3. In the **General Settings** interface, you can configure the following settings: NIC Type, IPv4 Address, IPv4 Gateway, MTU and DNS Server.

   If the DHCP server is available, you can click the checkbox of **DHCP** to automatically obtain an IP address and other network settings from that server.

   Note: The valid value range of MTU is 500 ~ 9676.
4. After having configured the general settings, click the **Apply** button to save the settings.

9.2 Configuring Advanced Settings

9.2.1 Configuring PPPoE Settings

Purpose:

Your DVR also allows access by Point-to-Point Protocol over Ethernet (PPPoE).

Steps:

1. Enter the **Network Settings** interface.

   Menu > Configuration > Network
2. Select the **PPPoE** tab to enter the PPPoE Settings interface, as shown in Figure 9.2.

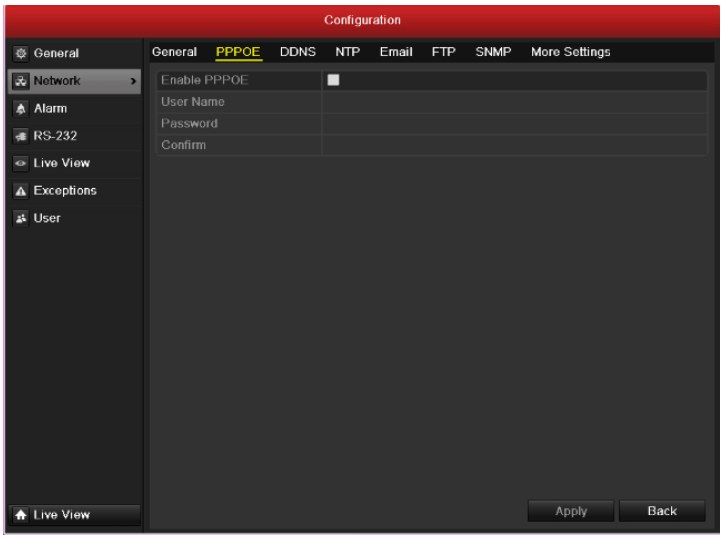

Figure 9.2 PPPoE Settings Interface

3. Check the **PPPoE** checkbox to enable this feature.
4. Enter **User Name**, **Password**, and **Confirm Password** for PPPoE access.

Note: The User Name and Password should be assigned by your ISP.

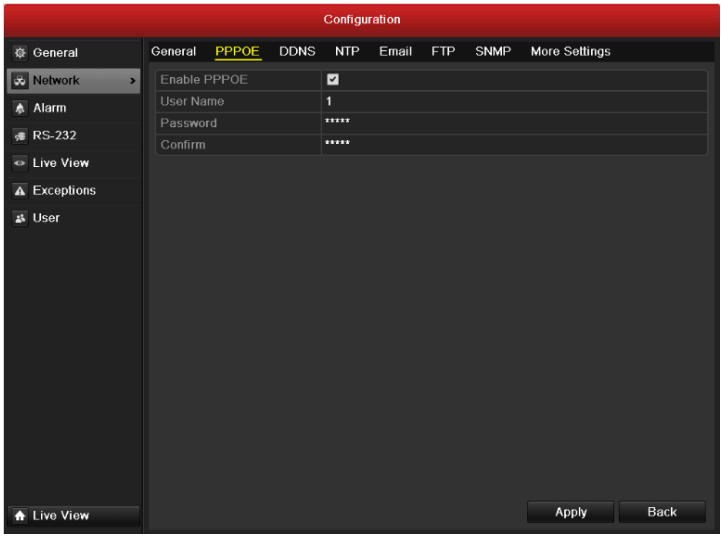

Figure 9.3 PPPoE Settings Interface

5. Click the **Apply** button to save and exit the interface.
6. After successful settings, the system asks you to reboot the device to enable the new settings, and the PPPoE dial-up is automatically connected after reboot.

You can go to Menu > Maintenance > System Info > Network interface to view the status of PPPoE connection. Please refer to *Chapter 12.1Viewing System Information* for PPPoE status.

9.2.2 Configuring DDNS

Purpose:

If your DVR is set to use PPPoE as its default network connection, you may set Dynamic DNS (DDNS) to be used for network access.

Prior registration with your ISP is required before configuring the system to use DDNS.

Steps:

1. Enter the Network Settings interface.

   Menu > Configuration > Network

2. Select the **DDNS** tab to enter the DDNS Settings interface, as shown in Figure 9.4.

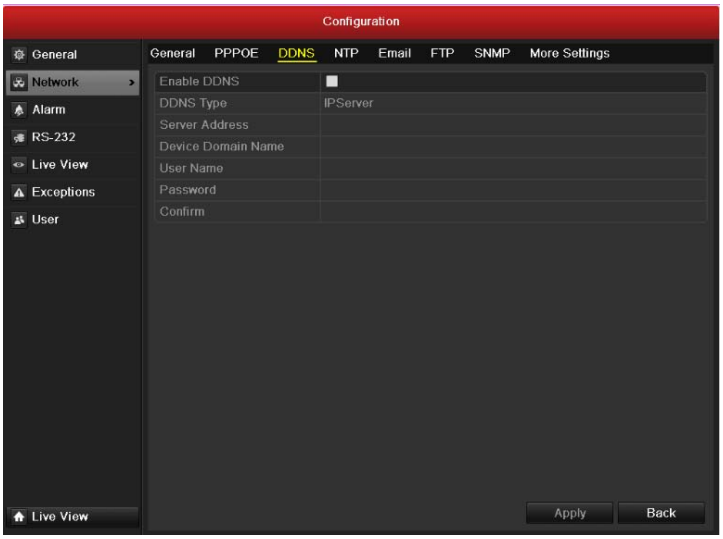

Figure 9.4 DDNS Settings Interface

3. Check the **DDNS** checkbox to enable this feature.
4. Select **DDNS Type**. Four different DDNS types are selectable: IPServer, DynDNS, PeanutHull and NO-IP.

   - **IPServer:** Enter **Server Address** for IPServer.

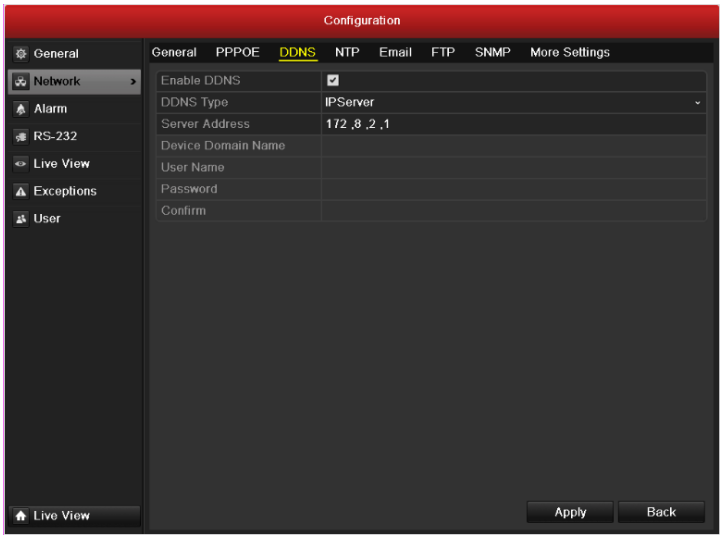

Figure 9.5 IPServer Settings Interface

   - **DynDNS:**
     1) Enter **Server Address** for DynDNS (i.e. members.dyndns.org).
     2) In the DVR Domain Name text field, enter the domain obtained from the DynDNS website.
     3) Enter the **User Name** and **Password** registered in the DynDNS website.

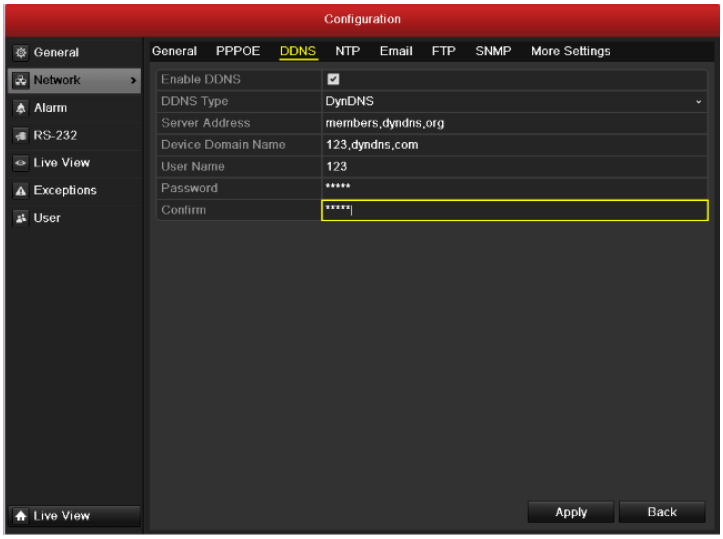

Figure 9.6 DynDNS Settings Interface

- **PeanutHull:** Enter User Name and Password obtained from the PeanutHull website.

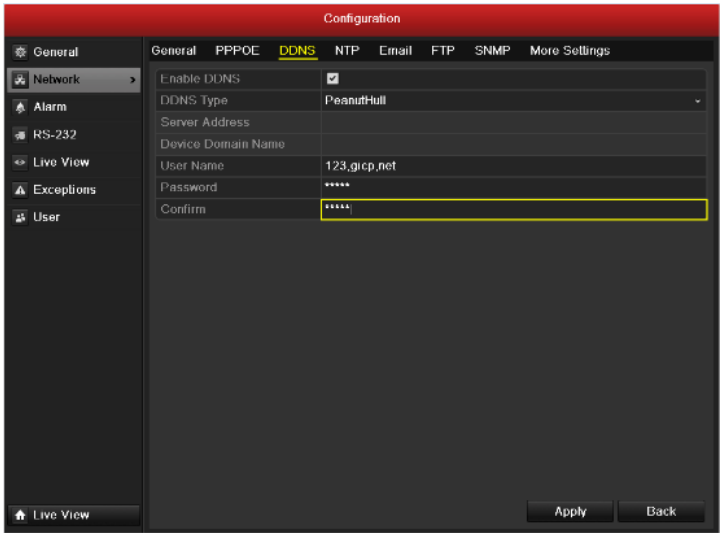

Figure 9.7 Peanut Hull Settings Interface

- **NO-IP:**

  Enter the account information in the corresponding fields. Refer to the DynDNS settings.

  1) Enter **Server Address** for NO-IP.
  2) In the DVR Domain Name text field, enter the domain obtained from the NO-IP website (www.no-ip.com).
  3) Enter the **User Name** and **Password** registered in the NO-IP website.

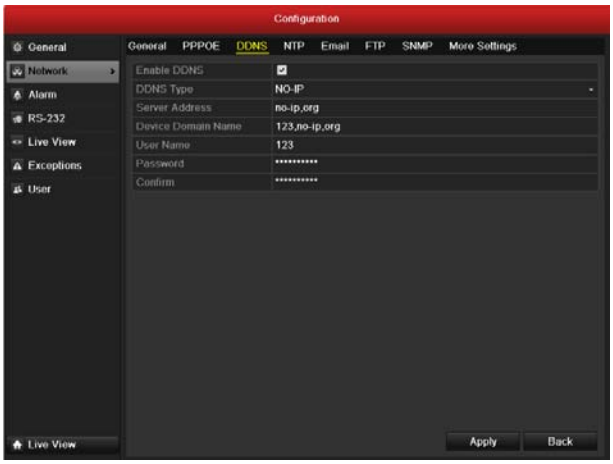

Figure 9.8 NO-IP Settings Interface

5. Click the **Apply** button to save and exit the interface.

9.2.3 Configuring NTP Server

Purpose:

A Network Time Protocol (NTP) Server can be configured on your DVR to ensure the accuracy of system date/time.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **NTP** tab to enter the NTP Settings interface, as shown in Figure 9.9.

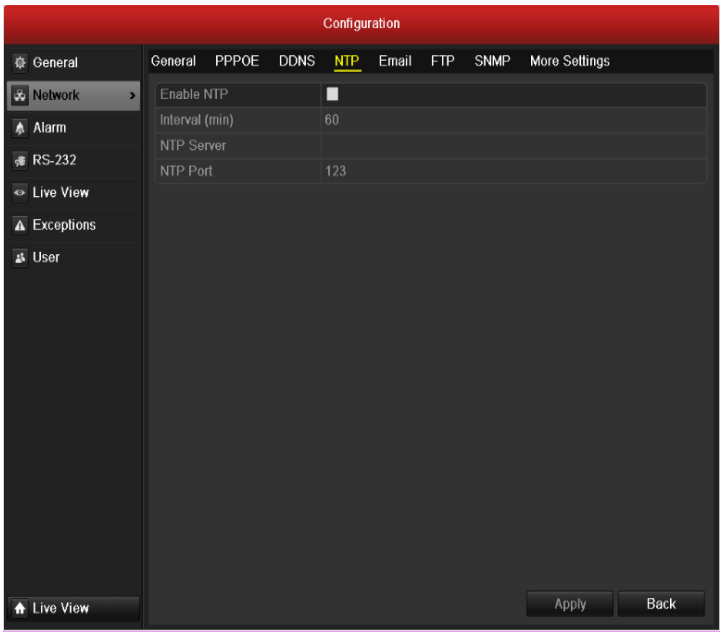

Figure 9.9 NTP Settings Interface

3. Check the **Enable NTP** checkbox to enable this feature.
4. Configure the following NTP settings:

- **Interval:** Time interval between the two synchronizing actions with NTP server. The unit is minute.
- **NTP Server:** IP address of NTP server.
- **NTP Port:** Port of NTP server.

5. Click the **Apply** button to save and exit the interface.

Note: The time synchronization interval can be set from 1 to 10080min, and the default value is 60min. If the DVR is connected to a public network, you should use a NTP server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44). If the DVR is setup in a more customized network, NTP software can be used to establish a NTP server used for time synchronization.

9.2.4 Configuring FTP Server

Purpose:

The FTP can be configured on your DVR to realize dual-directional transmission of control files over Internet. And the captured pictures of DVR can be uploaded to FTP server as well.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **FTP** tab to enter the FTP Settings interface, as shown in Figure 9.10.

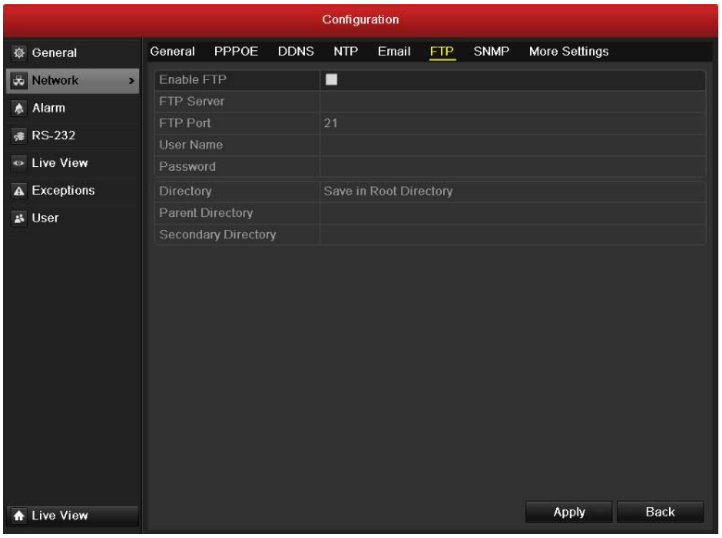

Figure 9.10 FTP Settings Interface

3. Check the **Enable FTP** checkbox to enable this feature.
4. Configure the NTP settings, including FTP server, port, user name, password and the directory.

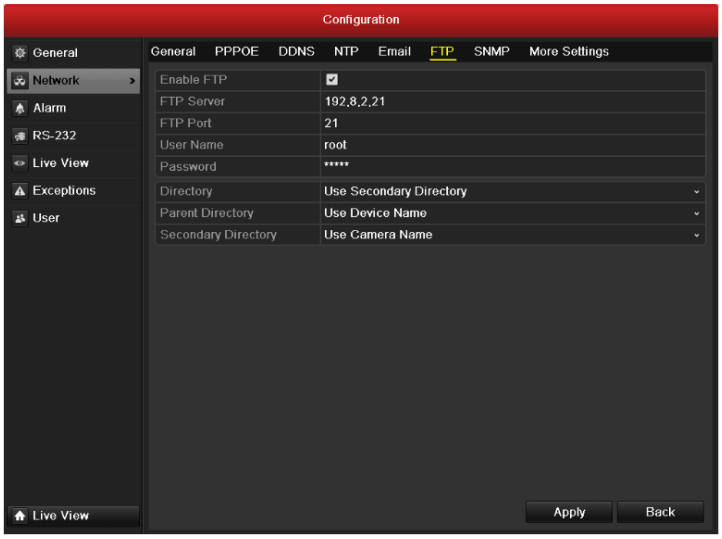

Figure 9.11 Configure FTP Settings

Directory: In the **Directory** field, you can select the Root Directory, Parent directory and secondary directory. When the Parent Directory is selected, you have the option to use the Device Name, Device No or Device IP for the name of the directory; and the when the Secondary Directory is selected, you can use the Camera Name or Camera No. as the name of the directory.

5. Click the **Apply** button to save and exit the interface.

Note: Please make sure the remote FTP server has been started up before setting the FTP parameters.

9.2.5 Configuring SNMP

Purpose:

You can use SNMP protocol to get device status and parameters related information.

Steps:

1. Enter the Network Settings interface.

   Menu > Configuration > Network

2. Select the **SNMP** tab to enter the SNMP Settings interface, as shown in Figure 9.12.

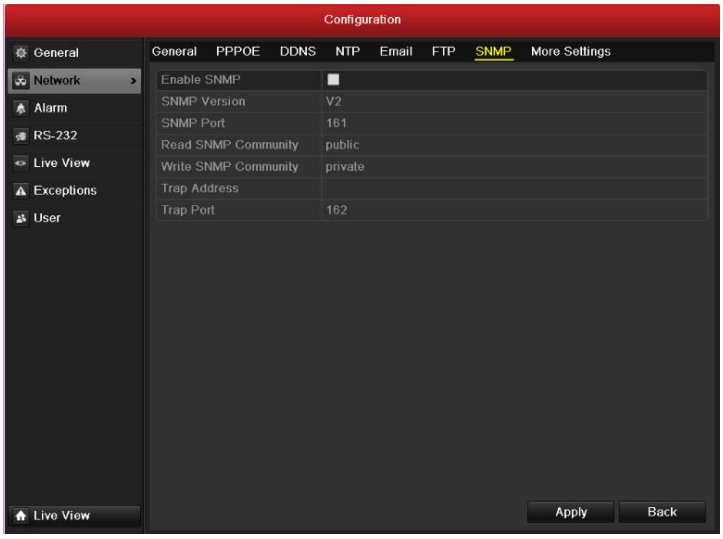

Figure 9.12 SNMP Settings Interface

3. Check the **SNMP** checkbox to enable this feature.
4. Configure the SNMP settings.

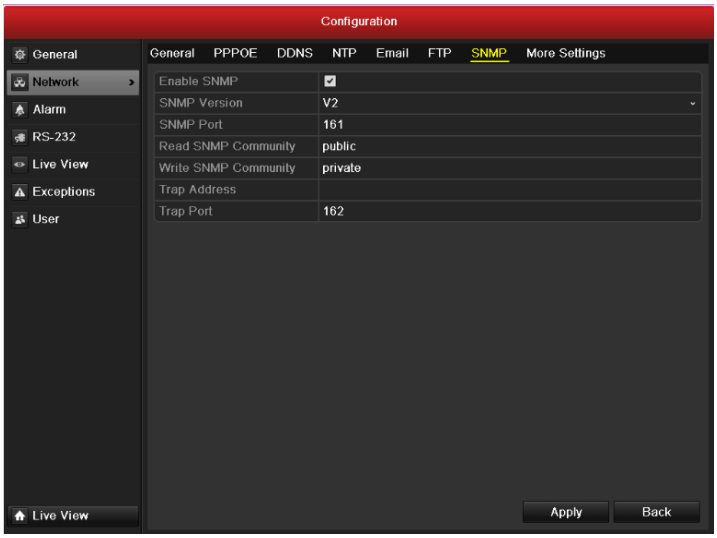

Figure 9.13 Configure SNMP Settings

5. Click the **Apply** button to save and exit the interface.

Note: Before setting the SNMP, please download the SNMP software and manage to receive the device information via SNMP port. By setting the Trap Address, the DVR is allowed to send the alarm event and exception message to the surveillance center.

9.2.6 Configuring Remote Alarm Host

Purpose:

With a remote alarm host configured, the DVR will send the alarm event or exception message to the host when an alarm is triggered. The remote alarm host must have the Network Video Surveillance software installed.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface, as shown in Figure 9.14.

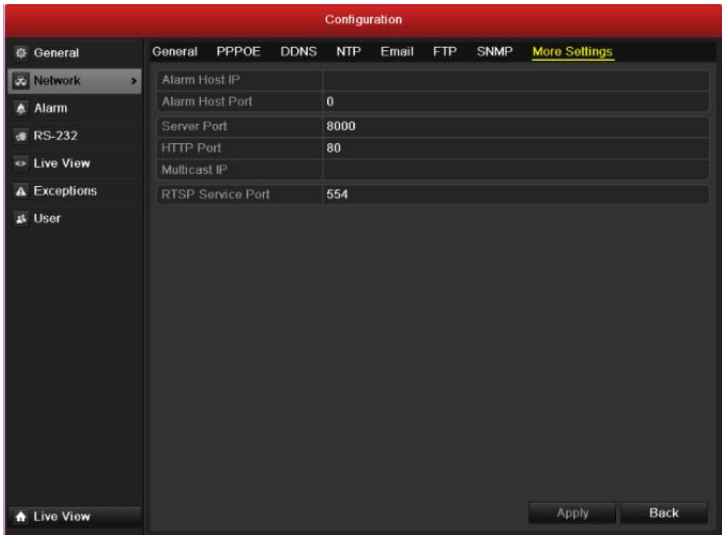

Figure 9.14 More Settings Interface

3. Enter **Alarm Host IP** and **Alarm Host Port** in the text fields.

   The **Alarm Host IP** refers to the IP address of the remote PC on which the Network Video Surveillance Software (e.g., iVMS-4000) is installed, and the **Alarm Host Port** must be the same as the alarm monitoring port configured in the software (default port is 0).

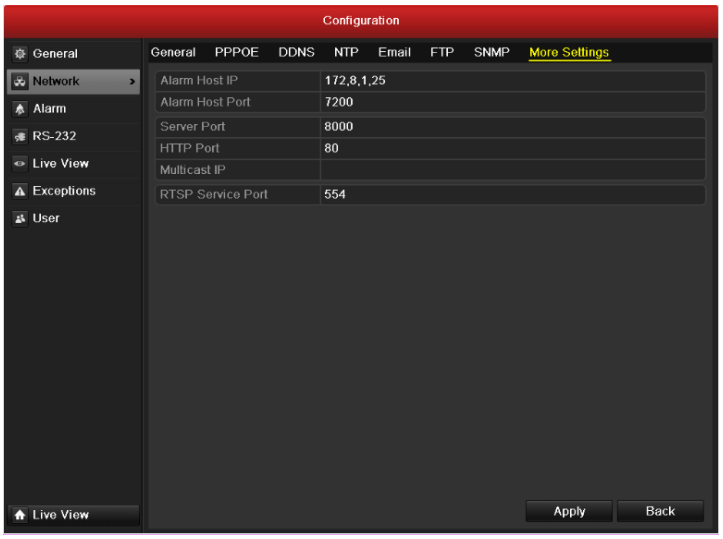

Figure 9.15 Configure Alarm Host

4. Click the **Apply** button to save and exit the interface.

9.2.7 Configuring Multicast

Purpose:

The multicast can be configured to realize live view for more than 128 cameras through network.

A multicast address spans the Class-D IP range of 224.0.0.0 to 239.255.255.255. It is recommended to use the IP address ranging from 239.252.0.0 to 239.255.255.255.

Steps:

1. Enter the Network Settings interface.

Menu > Configuration > Network

2. Select the **More Settings** tab to enter the More Settings interface, as shown in Figure 9.14.
3. Set **Multicast IP**, as shown in Figure 9.19. When adding a device to the Network Video Surveillance Software, the multicast address must be the same as the DVR's multicast IP.

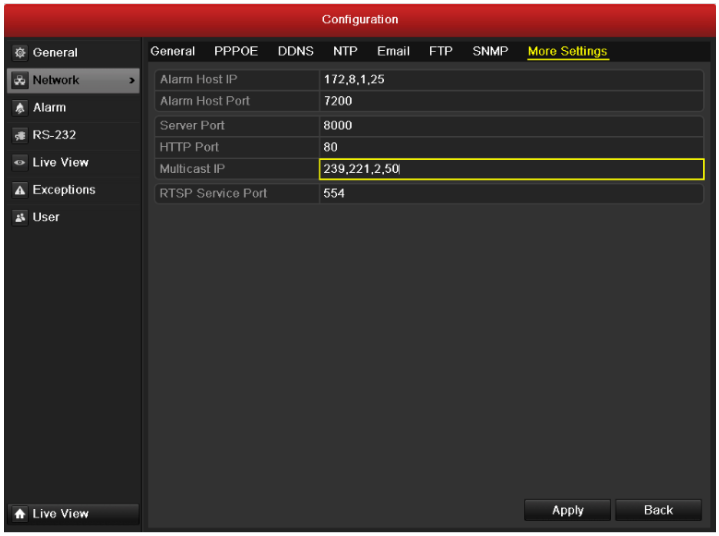

Figure 9.16 Configure Multicast

4. Click the **Apply** button to save and exit the interface.

9.2.8 Configuring RTSP

Purpose:

The RTSP (Real Time Streaming Protocol) is a network control protocol designed for use in entertainment and communications systems to control streaming media servers.

Steps:

1. Enter the Network Settings menu by clicking Menu > Configuration > Network.
2. Select the **More Settings** tab to enter the More Settings menu, as shown in Figure 9.14.

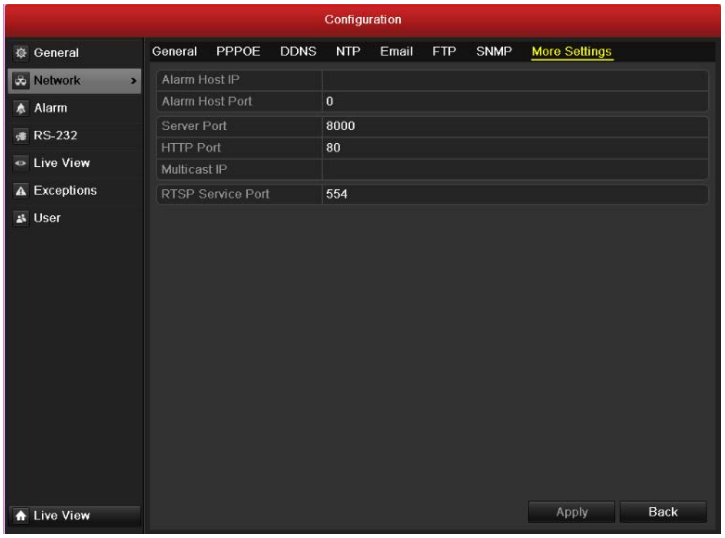

Figure 9.17 RTSP Settings Interface

3. Enter the RTSP port in the text field of **RTSP Service Port**. The default RTSP port is 554, and you can change it according to different requirements.
4. Click the **Apply** button to save and exit the menu.

9.2.9 Configuring Server and HTTP Ports

Purpose:

You can change the server and HTTP ports in the Network Settings menu. The default server port is 8000 and the default HTTP port is 80.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface, as shown in Figure 9.14.
3. Enter new **Server Port** and **HTTP Port**, as shown in Figure 9.18.

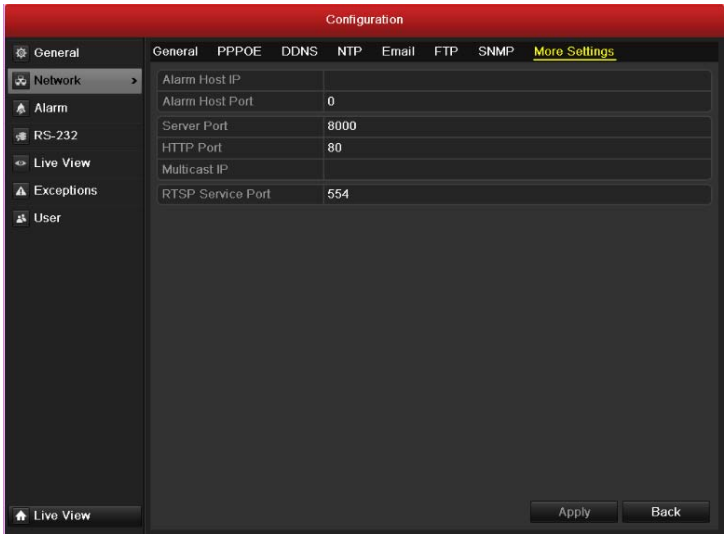

Figure 9.18 Host/Others Settings Menu

4. Enter the Server Port and HTTP Port in the text fields. The default Server Port is 8000 and the HTTP Port is 80, and you can change them according to different requirements.
5. Click the **Apply** button to save and exit the interface.

Note: The Server Port should be set to the range of 2000-65535 and it is used for remote client software access. The HTTP port is used for remote IE access.

9.2.10 Configuring Email

Purpose:

The system can be configured to send an Email notification to all designated users if an alarm event is detected, etc., an alarm or motion event is detected or the administrator password is changed.

Before configuring the Email settings, the DVR must be connected to a local area network (LAN) that maintains an SMTP mail server. The network must also be connected to either an intranet or the Internet depending on the location of the e-mail accounts to which you want to send notification.

Steps:

1. Enter the Network Settings interface.

   Menu > Configuration > Network

2. Set the IPv4 Address, IPv4 Subnet Mask, IPv4 Gateway and the Preferred DNS Server in the Network Settings menu, as shown in Figure 9.19.

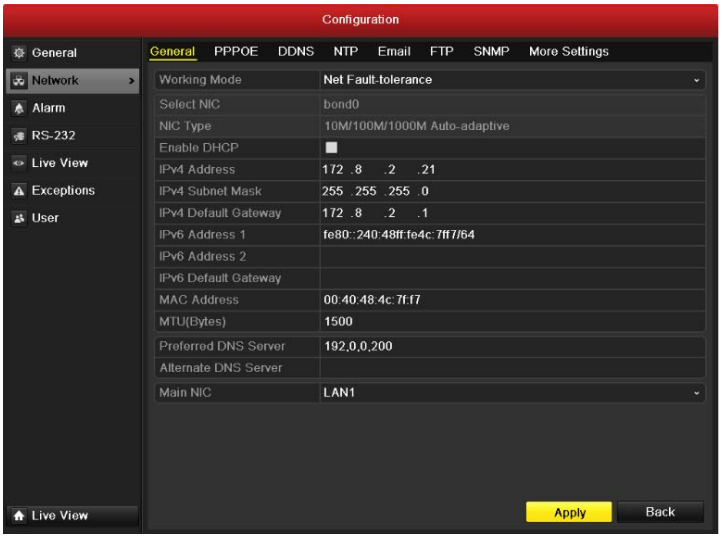

Figure 9.19 Network Settings Interface

3. Click the **Apply** button to save the settings.
4. Select the **Email** tab to enter the Email Settings interface.

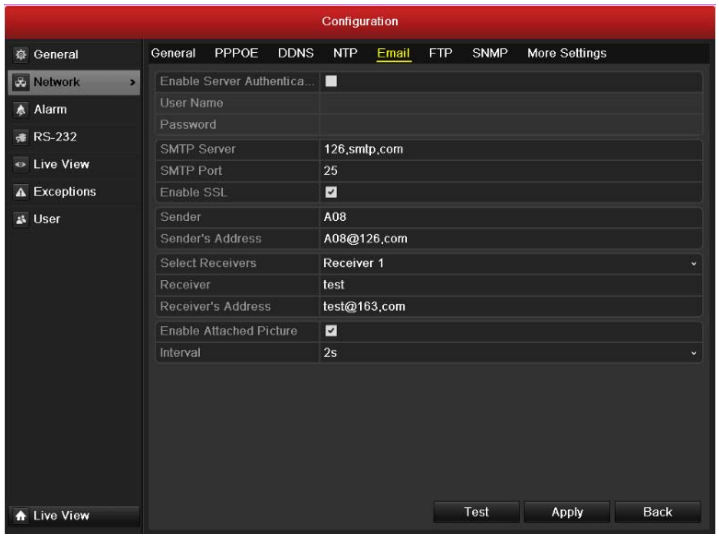

Figure 9.20 Email Settings Interface

5. Configure the following Email settings:

   Enable Server Authentication (optional): Check the checkbox to enable the server authentication feature.

   User Name: The user account of sender's Email for SMTP server authentication.

   Password: The password of sender's Email for SMTP server authentication.

   SMTP Server: The SMTP Server IP address or host name (e.g., smtp.263xmail.com).

   SMTP Port No.: The SMTP port. The default TCP/IP port used for SMTP is 25.

Enable SSL(optional): Click the checkbox to enable SSL if required by the SMTP server.

Sender: The name of sender.

Sender's Address: The Email address of sender.

Select Receivers: Select the receiver. Up to 3 receivers can be configured.

Receiver: The name of user to be notified.

Receiver's Address: The Email address of user to be notified.

Enable Attached Pictures: Check the checkbox of **Enable Attached Picture** if you want to send email with attached alarm images. The interval is the time of two adjacent alarm images. You can also set SMTP port and enable SSL here.

Interval: The interval refers to the time between two actions of sending attached pictures.

E-mail Test: Sends a test message to verify that the SMTP server can be reached.

6. Click the **Apply** button to save the Email settings.
7. You can click the **Test** button to test whether your Email settings work. The corresponding Attention message box will pop up. Refer to Figure 9.21.

Figure 9.21 Email Testing Attention

9.3 Checking Network Traffic

Purpose:

You can check the network traffic to obtain real-time information of DVR such as linking status, MTU, sending/receiving rate, etc.

Steps:

1. Enter the Network Traffic interface.

   Menu > Maintenance > Net Detect

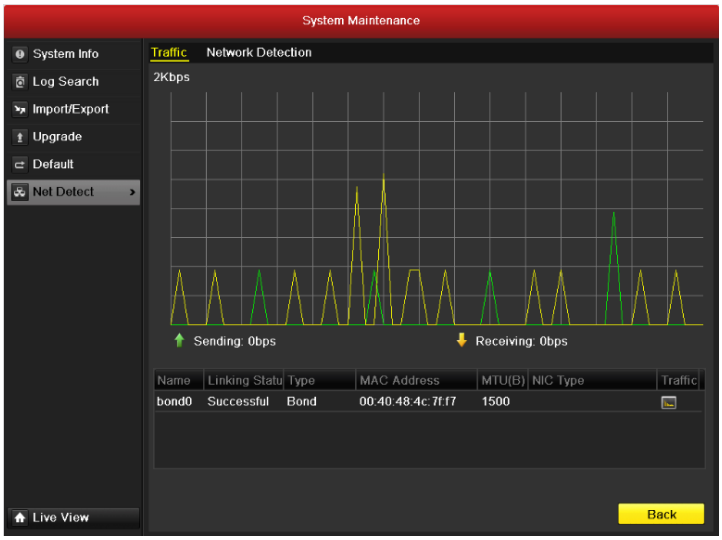

Figure 9.22 Network Traffic Interface

2. You can view the sending rate and receiving rate information on the interface. The traffic data is refreshed every 1 second.

9.4 Configuring Network Detection

Purpose:

You can obtain network connecting status of DVR through the network detection function, including network delay, packet loss, etc.

9.4.1 Testing Network Delay and Packet Loss

Steps:

1. Enter the Network Traffic interface.
   Menu > Maintenance > Net Detect
2. Click the **Network Detection** tab to enter the Network Detection menu, as shown in Figure 9.23.

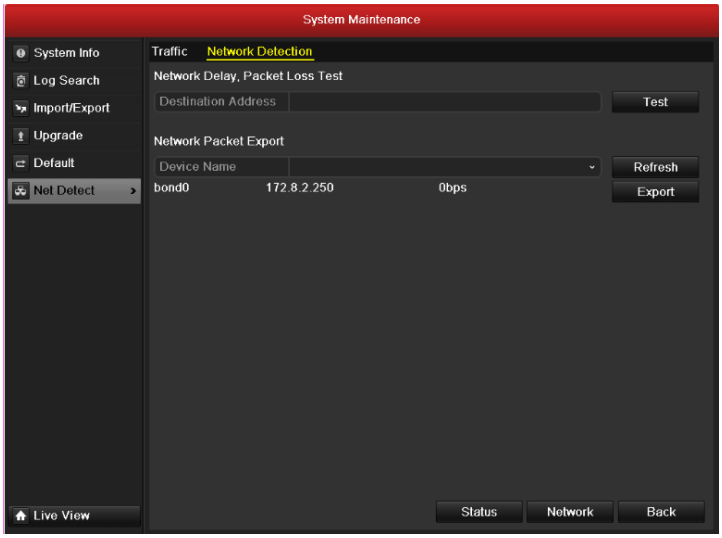

Figure 9.23 Network Detection Interface

3. Enter the destination address in the text field of **Destination Address**.
4. Click the **Test** button to start testing network delay and packet loss. The testing result pops up on the window. If the testing is failed, the error message box will pop up as well. Refer to Figure 9.24.

Figure 9.24 Testing Result of Network Delay and Packet Loss

9.4.2 Exporting Network Packet

Purpose:

By connecting the DVR to network, the captured network data packet can be exported to USB-flash disk, SATA/eSTATA CD-RW and other local backup devices.

Steps:

1. Enter the Network Traffic interface.
   Menu > Maintenance > Net Detect
2. Click the **Network Detection** tab to enter the Network Detection interface.
3. Select the backup device from the dropdown list of Device Name, as shown in Figure 9.25.
   Note: Click the **Refresh** button if the connected local backup device cannot be displayed. When it fails to detect the backup device, please check whether it is compatible with the DVR. You can format the backup device if the format is incorrect.

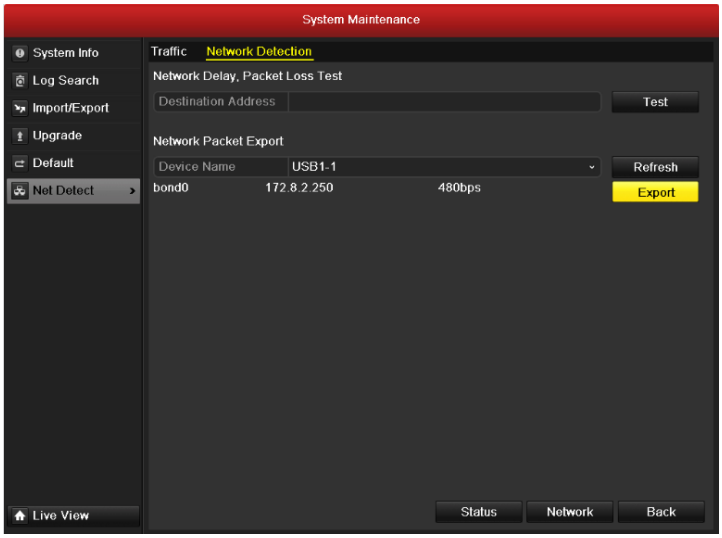

Figure 9.25 Export Network Packet

4. Click the **Export** button to start exporting.
5. After the exporting is complete, click **OK** to finish the packet export, as shown in Figure 9.26.

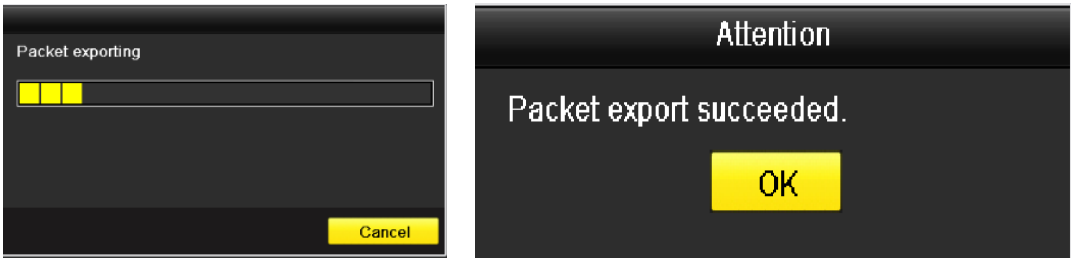

Figure 9.26 Packet Export Attention

Note: Up to 1M data can be exported each time.

C H A P T E R 1 0

HDD Management

10.1 Initializing HDDs

Purpose:

A newly installed hard disk drive (HDD) must be initialized before it can be used with your DVR.

Steps:

1. Enter the HDD Information interface.

   Menu > HDD>General.

Figure 10.1 HDD Information Interface

2. Select HDD to be initialized.
3. Click the **Init** button.

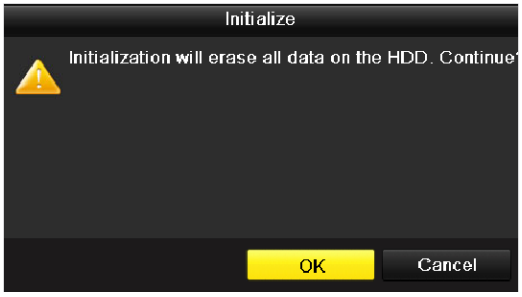

Figure 10.2 Confirm Initialization

4. Select the **OK** button to start initialization.

Figure 10. 3 Start Initialization

5. After the HDD has been initialized, the status of the HDD will change from *Uninitialized* to *Normal*.

Figure 10.4 HDD Status Changes to Normal

Note: Initializing the HDD will erase all data on it.

10.2 Managing Network HDD

Purpose:

You can add the allocated NAS or disk of IP SAN to DVR, and use it as network HDD.

Steps:

1. Enter the HDD Information interface.

   Menu > HDD>General.

Figure 10.5 HDD Information Interface

2. Click the **Add** button to enter the Add NetHDD interface, as shown in Figure 10.6.

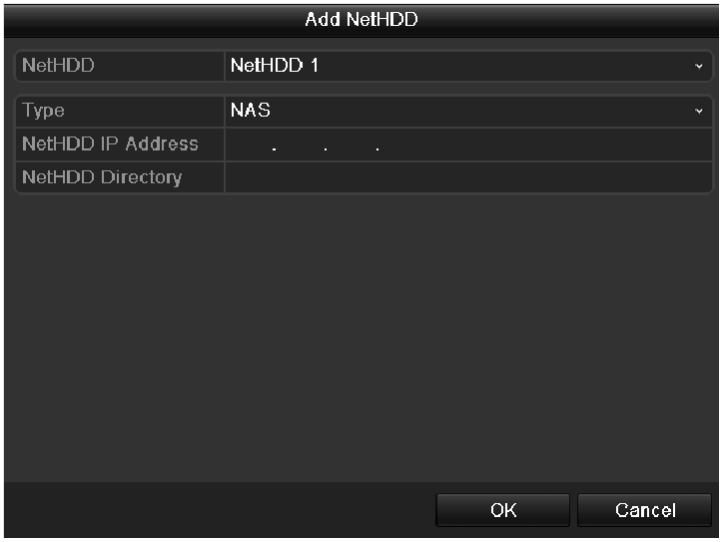

Figure 10.6 HDD Information Interface

3. Add the allocated NetHDD.
4. Select the type to NAS or IP SAN.
5. Configure the NAS or IP SAN settings.
   - **Add NAS disk:**

1) Enter the NetHDD IP address in the text field.
2) Enter the NetHDD Directory in the text field.
3) Click the **OK** button to add the configured NAS disk.

Note: Up to 8 NAS disks can be added.

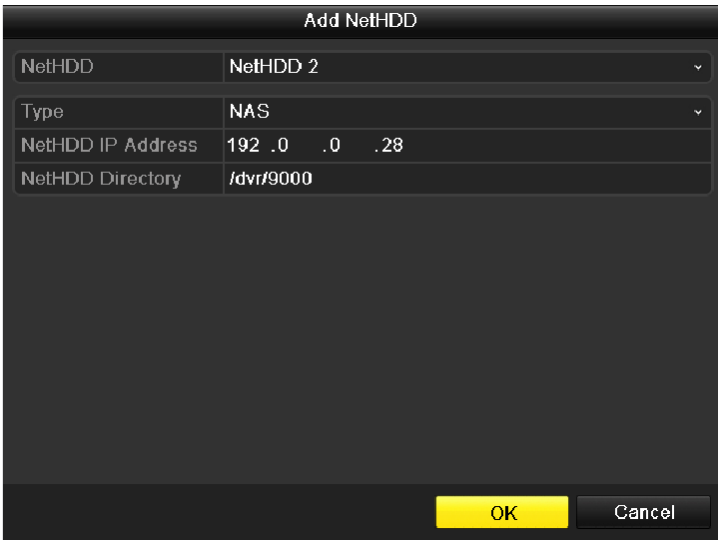

Figure 10.7 Add NAS Disk

- **Add IP SAN:**

1) Enter the NetHDD IP address in the text field.
2) Click the **Search** button to the available IP SAN disks.
3) Select the IP SAN disk from the list shown below.
4) Click the **OK** button to add the selected IP SAN disk.

Note: Up to 1 IP SAN disk can be added.

Figure 10. 8 Add IP SAN Disk

6. After having successfully added the NAS or IP SAN disk, return to the HDD Information menu. The added NetHDD will be displayed in the list.

Note: If the added NetHDD is uninitialized, please select it and click the **Init** button for initialization.

Figure 10.9 Initialize Added NetHDD

10.3 Managing eSATA

Purpose:

When there is an external eSATA device connected to DVR, you can configure eSATA for the use of Record/Capture or Export, and you can manage the eSATA in the DVR.

Steps:

1. Enter the Advanced Record Settings interface.
   Menu > Record>Advanced
2. Select the eSATA type to Export or Record/Capture from the dropdown list of **eSATA**.
   Export: use the eSATA for backup. Refer to *Backup using eSATA HDDs* in *Chapter 7.1.2 Backing up by Normal Video Search* for operating instructions.
   Record/Capture: use the eSATA for record/capture. Refer to the following steps for operating instructions.

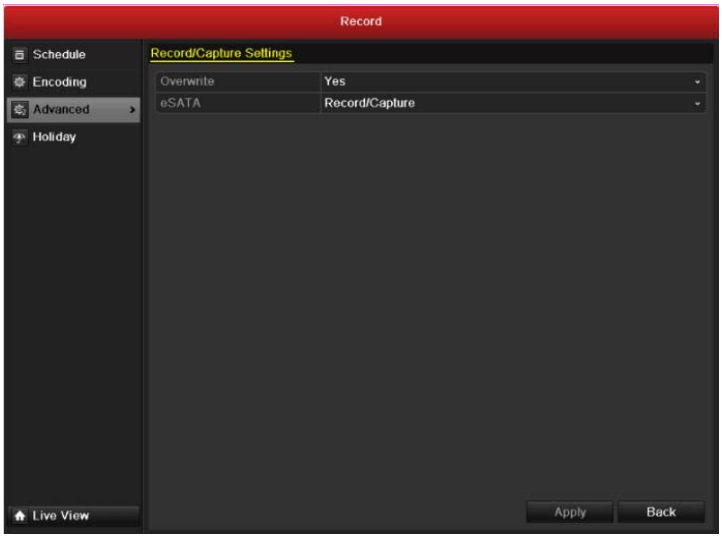

Figure 10.10 Set eSATA Mode

3. When the eSATA type is selected to Record/Capture, enter the HDD Information interface.
   Menu > HDD>General
4. Edit the property of the selected eSATA, or initialize it is required.
   Note: Two storage modes can be configured for the eSATA when it is used for Record/Capture. Please refer to *Chapter 10.4* and *Chapter 10.5* for details.

Figure 10.11 Initialize Added NetHDD

10.4 Managing HDD Group

10.4.1 Setting HDD Groups

Purpose:

Multiple HDDs can be managed in groups. Video from specified channels can be recorded onto a particular HDD group through HDD settings.

Steps:

1. Enter the Storage Mode interface.
   Menu > HDD > Advanced
2. Set the **Mode** to Group, as shown in Figure 10.12.

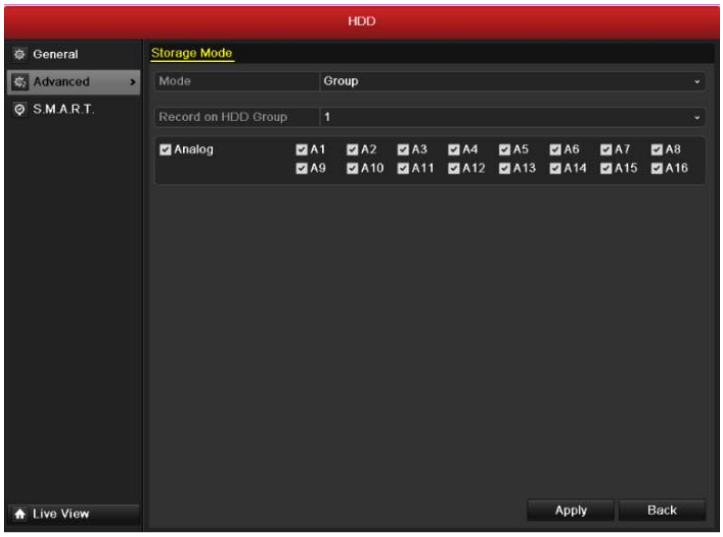

Figure 10.12 Storage Mode Interface

3. Click the **Apply** button and the following Attention box will pop up.

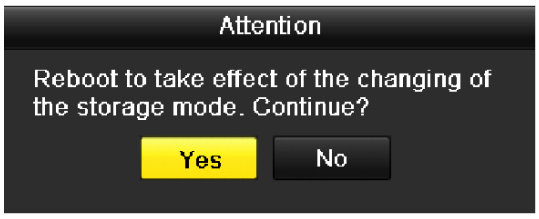

Figure 10.13 Attention for Reboot

4. Click the **Yes** button to reboot the device to activate the changes.
5. After reboot of device, enter the HDD Information interface.
   Menu > HDD > General
6. Select HDD from the list and click the icon to enter the Local HDD Settings interface, as shown in Figure 10.14.

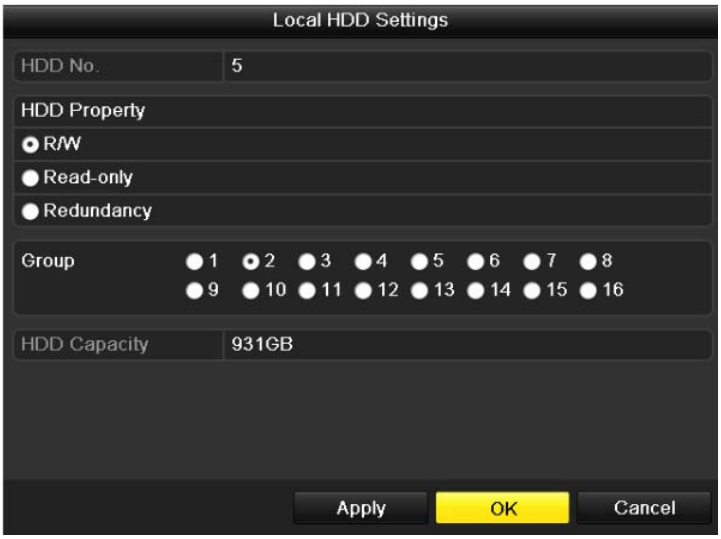

Figure 10.14 Local HDD Settings Interface

7. Select the Group number for the current HDD.

Note: The default group No. for each HDD is 1.

8. Click the **OK** button to confirm the settings.

Figure 10. 15 Confirm HDD Group Settings

9. In the pop-up Attention box, click the **Yes** button to finish the settings.

10.4.2 Setting HDD Property

Purpose:

The HDD property can be set to redundancy, read-only or read/write (R/W). Before setting the HDD property, please set the storage mode to Group (refer to step1-4 of Chapter 10.4.1 Setting HDD Groups).

A HDD can be set to read-only to prevent important recorded files from being overwritten when the HDD becomes full in overwrite recording mode.

When the HDD property is set to redundancy, the video can be recorded both onto the redundancy HDD and the R/W HDD simultaneously so as to ensure high security and reliability of video data.

Steps:

1. Enter the HDD Information interface.

   Menu > HDD > General

2. Select HDD from the list and click the icon to enter the Local HDD Settings interface, as shown in Figure 10.16.

Figure 10.16 Set HDD Property

3. Set the HDD property to R/W, Read-only or Redundancy.
4. Click the **OK** button to save the settings and exit the interface.
5. In the HDD Information menu, the HDD property will be displayed in the list.

Note: At least 2 hard disks must be installed on your DVR when you want to set a HDD to Redundancy, and there is one HDD with R/W property.

10.5 Configuring Quota Mode

Purpose

Each camera can be configured with allocated quota for the storage of recorded files or captured pictures.

Steps

1. Enter the Storage Mode interface.

   Menu > HDD > Advanced

2. Set the **Mode** to Quota, as shown in Figure 10.17.

   Note: The DVR must be rebooted to enable the changes to take effect.

Figure 10.17 Storage Mode Settings Interface

3. Select a camera for which you want to configure quota.
4. Enter the storage capacity in the text fields of **Max. Record Capacity (GB)** and **Max. Picture Capacity (GB)**, as shown in Figure 10.18.

Figure 10.18 Configure Record/Picture Quota

5. You can copy the quota settings of the current camera to other cameras if required. Click the **Copy** button

to enter the Copy Camera menu, as shown in Figure 10.19.

Figure 10.19 Copy Settings to Other Camera(s)

6. Select the camera (s) to be configured with the same quota settings. You can also click the checkbox of Analog to select all cameras.
7. Click the **OK** button to finish the Copy settings and back to the Storage Mode interface.
8. Click the **Apply** button to apply the settings.

   Note: If the quota capacity is set to *0*, then all cameras will use the total capacity of HDD for record and picture capture.

10.6 Checking HDD Status

Purpose:

You may check the status of the installed HDDs on DVR so as to take immediate check and maintenance in case of HDD failure.

Checking HDD Status in HDD Information Interface

Steps:

1. Enter the HDD Information interface.
   Menu > HDD>General
2. Check the status of each HDD which is displayed on the list, as shown in Figure 10.20.

Figure 10.20 View HDD Status (1)

Note: If the status of HDD is *Normal* or *Sleeping*, it works normally. If the status is *Uninitialized* or *Abnormal*, please initialize the HDD before use. And if the HDD initialization is failed, please replace it with a new one.

Checking HDD Status in HDD Information Interface

Steps:

1. Enter the System Information interface.
   Menu > Maintenance > System Info
2. Click the **HDD** tab to view the status of each HDD displayed on the list, as shown in Figure 10.21.

Figure 10.21 View HDD Status (2)

10.7 Checking S.M.A.R.T Information

Purpose:

The S.M.A.R.T. *(*Self-Monitoring, Analysis and Reporting Technology*)* is a monitoring system for HDD to detect and report on various indicators of reliability in the hopes of anticipating failures.

Steps:

1. Enter the S.M.A.R.T Settings interface.

   Menu > HDD > S.M.A.R.T.

2. Check the checkbox of **Enable S.M.A.R.T**.

3. Select the HDD to view its S.M.A.R.T information list, as shown in Figure 10.22.

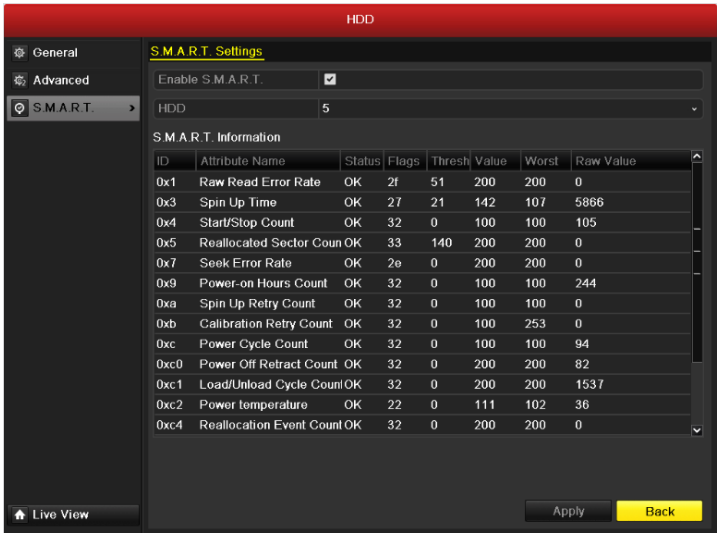
HDD
General
Advanced
S.M.A.R.T.
Live View
S.M.A.R.T. Settings
Enable S.M.A.R.T.
HDD
5
S.M.A.R.T. Information
ID Attribute Name Status Flags Thresh Value Worst Raw Value
0x1 Raw Read Error Rate OK 2f 51 200 200 0
0x3 Spin Up Time OK 27 21 142 107 5866
0x4 Start/Stop Count OK 32 0 100 100 105
0x5 Reallocated Sector Coun OK 33 140 200 200 0
0x7 Seek Error Rate OK 2e 0 200 200 0
0x9 Power-on Hours Count OK 32 0 100 100 244
0xa Spin Up Retry Count OK 32 0 100 100 0
0xb Calibration Retry Count OK 32 0 100 253 0
0xc Power Cycle Count OK 32 0 100 100 94
0xc0 Power Off Retract Count OK 32 0 200 200 82
0xc1 Load/Unload Cycle Count OK 32 0 200 200 1537
0xc2 Power temperature OK 22 0 111 102 36
0xc4 Reallocation Event Count OK 32 0 200 200 0
Apply
Back

Figure 10.22 S.M.A.R.T Settings Interface

10.8 Configuring HDD Error Alarms

Purpose:

You can configure the HDD error alarms when the HDD status is *Uninitialized* or *Abnormal*.

Steps:

1. Enter the Exception interface.

   Menu > Configuration > Exceptions

2. Select the Exception Type to **HDD Error** from the dropdown list.
3. Click the checkbox(s) below to select the HDD error alarm type (s), as shown in Figure 10.23.

Note: The alarm type can be selected to: Audio Warning, Notify Surveillance Center, Send Email and Trigger Alarm Output. Please refer to *Chapter 8.6 Setting Alarm Response Actions*.

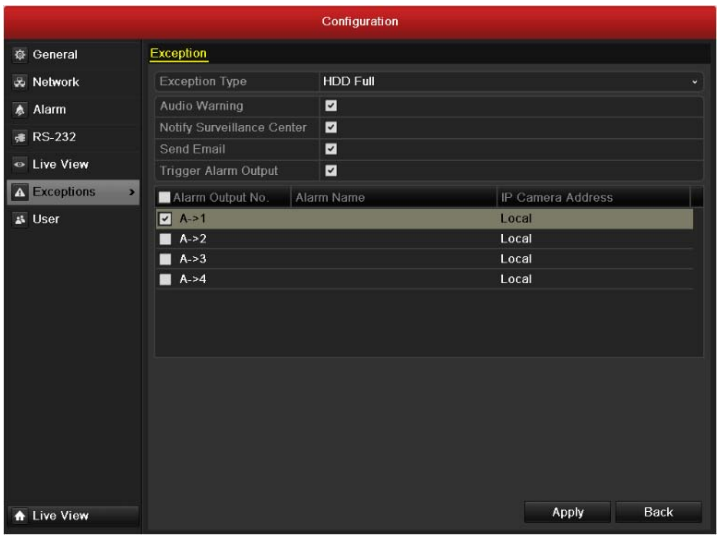

Figure 10.23 Configure HDD Error Alarm

4. When the Trigger Alarm Output is selected, you can also select the alarm output to be triggered from the list below.
5. Click the **Apply** button to save the settings.

C H A P T E R 11

Camera Settings

11.1 Configuring OSD Settings

Purpose:

You can configure the OSD (On-screen Display) settings for the camera, including date /time, camera name, etc.

Steps:

1. Enter the OSD Configuration interface.
   Menu > Camera > OSD
2. Select the camera to configure OSD settings.
3. Edit the Camera Name in the text field.
4. Configure the Display Name, Display Date and Display Week by clicking the checkbox.
5. Select the Date Format, Time Format and Display Mode.

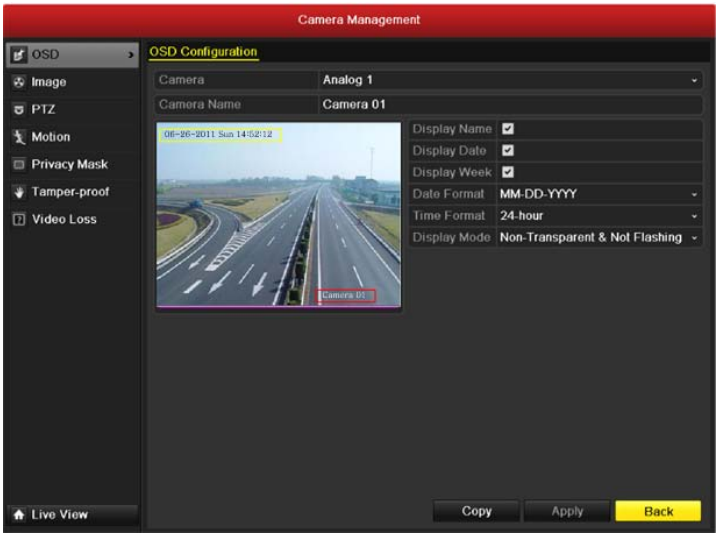

Figure 11. 1 OSD Configuration Interface

6. You can use the mouse to click and drag the text frame on the preview window to adjust the OSD position.
7. Copy Camera Settings
   1) If you want to copy the OSD settings of the current camera to other cameras, click the **Copy** button to enter the Copy Camera interface, as shown in Figure 11.2.

Figure 11.2 Copy Settings to Other Cameras

2) Select the camera (s) to be configured with the same OSD settings. You can also click the checkbox of Analog to select all cameras.
3) Click the **OK** button to finish the Copy settings and back to the OSD Configuration interface.

8. Click the **Apply** button to apply the settings.

11.2 Configuring Privacy Mask

Purpose:

You are allowed to configure the four-sided privacy mask zones that cannot be viewed by the operator.

Steps:

1. Enter the Privacy Mask Settings interface.

Menu > Camera > Privacy Mask

2. Select the camera to set privacy mask.

3. Click the checkbox of **Enable Privacy Mask** to enable this feature.

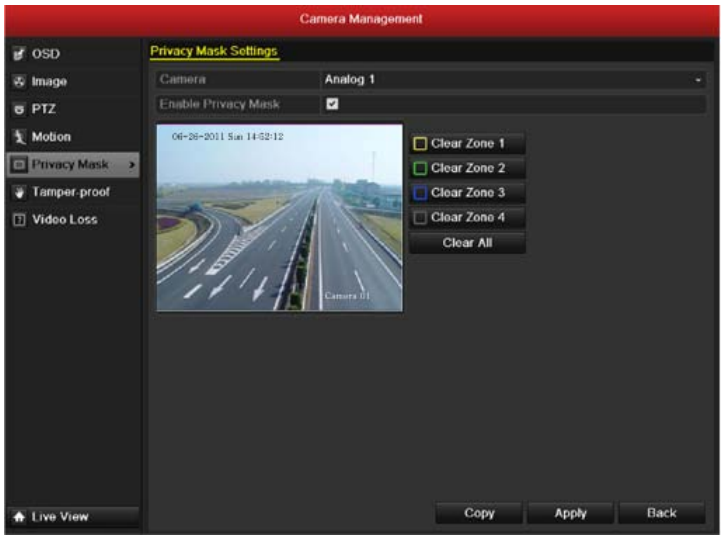

Figure 11.3 Privacy Mask Settings Interface

4. Use the mouse to draw a zone on the window. The zones will be marked with different frame colors.

Note: Up to 4 privacy mask zones can be configured, and the size of each area can be adjusted.

5. The configured privacy mask zones on the window can be cleared by clicking the corresponding Clear Zone1-4 icons on the right side of the window, or click **Clear All** to clear all zones.

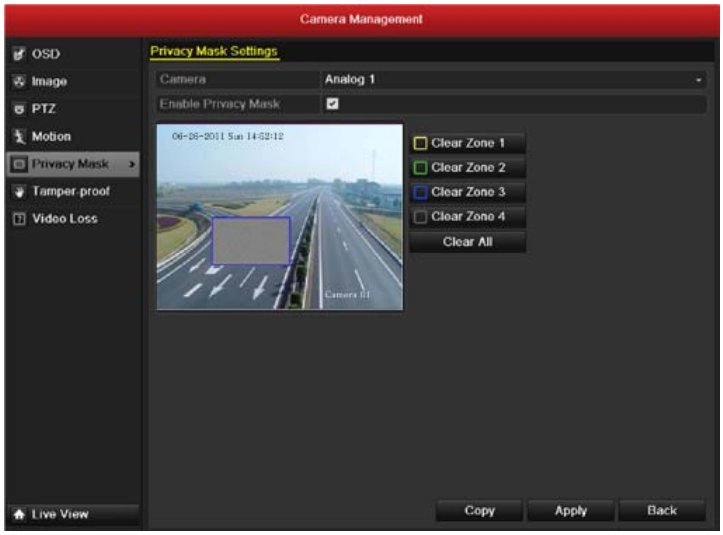

Figure 11. 4 Set Privacy Mask Area

6. You can click the **Copy** button to copy the privacy mask settings of the current camera to other cameras. Please refer to step 7 of *Chapter 11.1 Configuring OSD Settings*.
7. Click the **Apply** button to save the settings.

11.3 Configuring Video Parameters

Steps:

1. Enter the Image Settings interface.
   Menu > Camera > Image

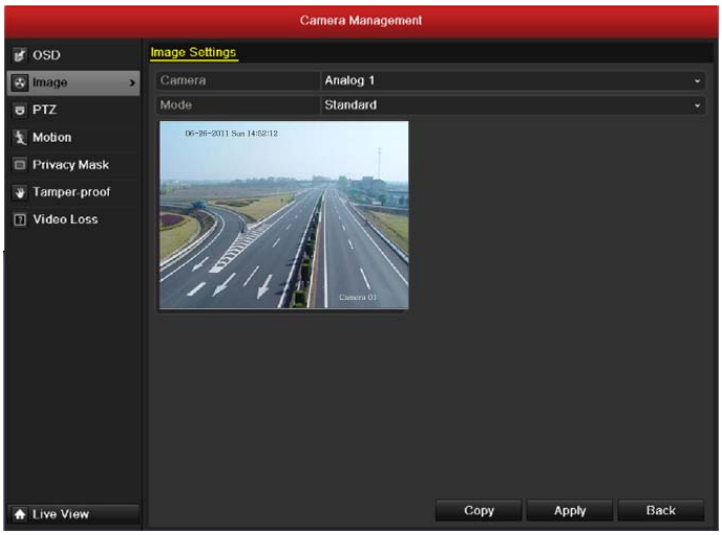

Figure 11.5 Image Settings Interface

2. Select the camera to set image parameters.
3. Select the mode from the dropdown list of **Mode**. Five modes are selectable: Standard, Indoor, Dim Light, Outdoor and Customize.
4. When the mode is selected to Customize, you can adjust the video parameters, including Brightness, Contrast, Saturation and Hue, as shown in Figure 11.6.

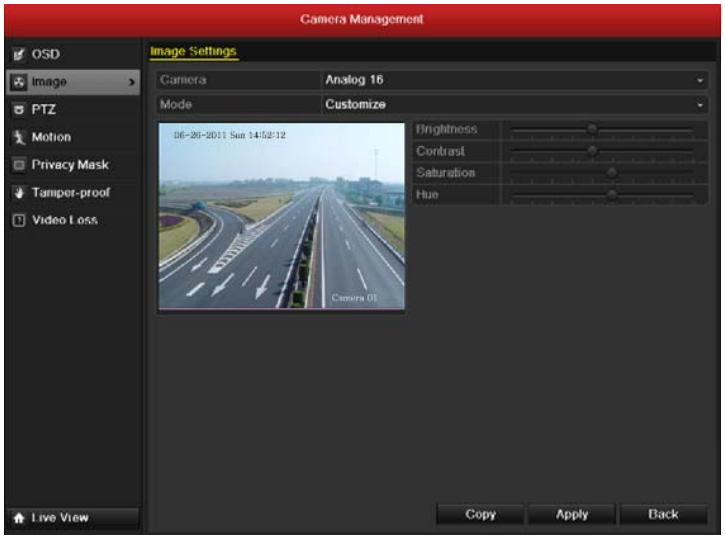

Figure 11.6 Configure Customized Image Settings

5. You can click the **Copy** button to copy the image settings of the current camera to other cameras. Please refer to step 7 of *Chapter 11.1 Configuring OSD Settings*.
6. Click the **Apply** button to save the settings.

C H A P T E R 1 2

DVR Management and Maintenace

12.1 Viewing System Information

12.1.1 Viewing Device Information

Steps:

1. Enter the System Information interface.
   Menu > Maintenance > System Info
2. Click the **Device Info** tab to enter the Device Information menu to view the device name, model, serial No. , firmware version and encode version, as shown in Figure 12.1.

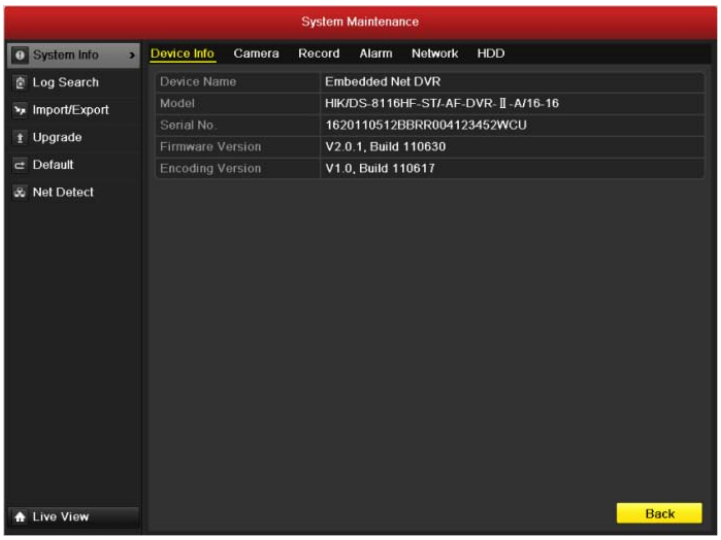

Figure 12.1 Device Information Interface

12.1.2 Viewing Camera Information

Steps:

1. Enter the System Information interface.
   Menu > Maintenance > System Info
2. Click the **Camera** tab to enter the Camera Information menu to view the status of each camera, as shown in Figure 12.2.

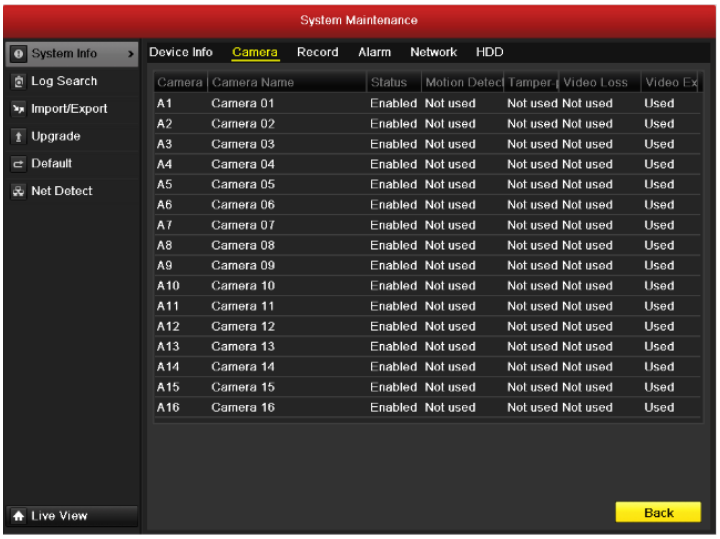
System Maintenance
System Info
Log Search
Import/Export
Upgrade
Default
Net Detect
Live View
Device Info
Camera
Record
Alarm
Network
HDD
Camera
Camera Name
Status
Motion Detect
Tamper
Video Loss
Video Ex
A1 Camera 01 Enabled Not used Not used Not used Used
A2 Camera 02 Enabled Not used Not used Not used Used
A3 Camera 03 Enabled Not used Not used Not used Used
A4 Camera 04 Enabled Not used Not used Not used Used
A5 Camera 05 Enabled Not used Not used Not used Used
A6 Camera 06 Enabled Not used Not used Not used Used
A7 Camera 07 Enabled Not used Not used Not used Used
A8 Camera 08 Enabled Not used Not used Not used Used
A9 Camera 09 Enabled Not used Not used Not used Used
A10 Camera 10 Enabled Not used Not used Not used Used
A11 Camera 11 Enabled Not used Not used Not used Used
A12 Camera 12 Enabled Not used Not used Not used Used
A13 Camera 13 Enabled Not used Not used Not used Used
A14 Camera 14 Enabled Not used Not used Not used Used
A15 Camera 15 Enabled Not used Not used Not used Used
A16 Camera 16 Enabled Not used Not used Not used Used
Back

Figure 12.2 Camera Information Interface

12.1.3 Viewing Record Information

Steps:

1. Enter the System Information interface.
   Menu > Maintenance > System Info
2. Click the **Record** tab to enter the Record Information menu to view the recording status encoding parameters of each camera, as shown in Figure 12.3.

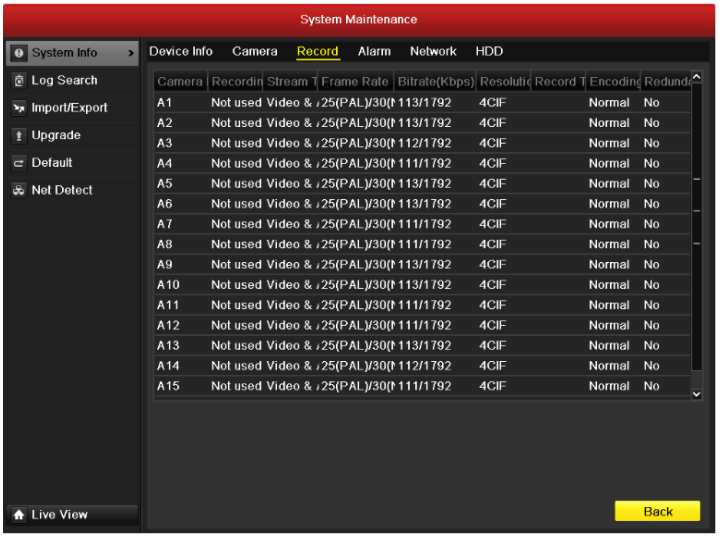
System Maintenance
System Info
Log Search
Import/Export
Upgrade
Default
Net Detect
Live View
Device Info
Camera
Record
Alarm
Network
HDD
Camera
Recordin
Stream T
Frame Rate
Bitrate(Kbps)
Resolutio
Record T
Encoding
Redund
A1 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A2 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A3 Not used Video & 25(PAL)/30(N 112/1792 4CIF Normal No
A4 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
A5 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A6 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A7 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
A8 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
A9 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A10 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A11 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
A12 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
A13 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A14 Not used Video & 25(PAL)/30(N 112/1792 4CIF Normal No
A15 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
Back

Figure 12.3 Record Information Interface

12.1.4 Viewing Alarm Information

Steps:

1. Enter the System Information interface.

Menu > Maintenance > System Info

2. Click the **Alarm** tab to enter the Alarm Information menu to view the alarm information, as shown in Figure 12.4.

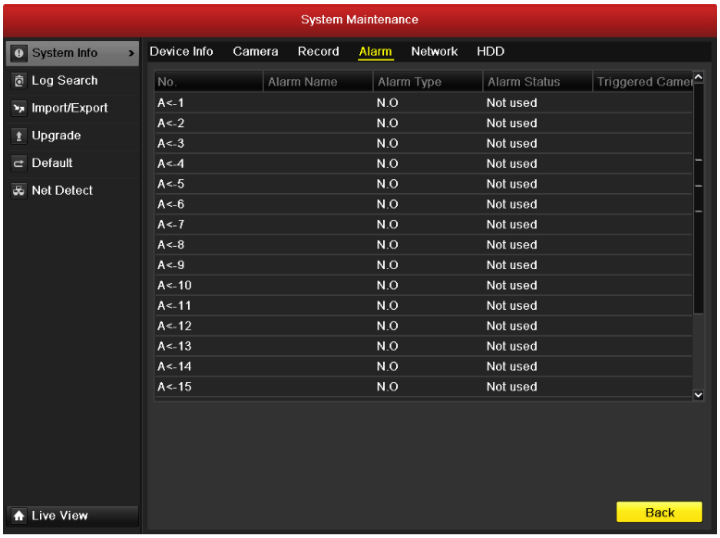

Figure 12.4 Alarm Information Interface

12.1.5 Viewing Network Information

Steps:

1. Enter the System Information interface.

   Menu > Maintenance > System Info

2. Click the **Network** tab to enter the Network Information menu to view the network information, as shown in Figure 12.5.

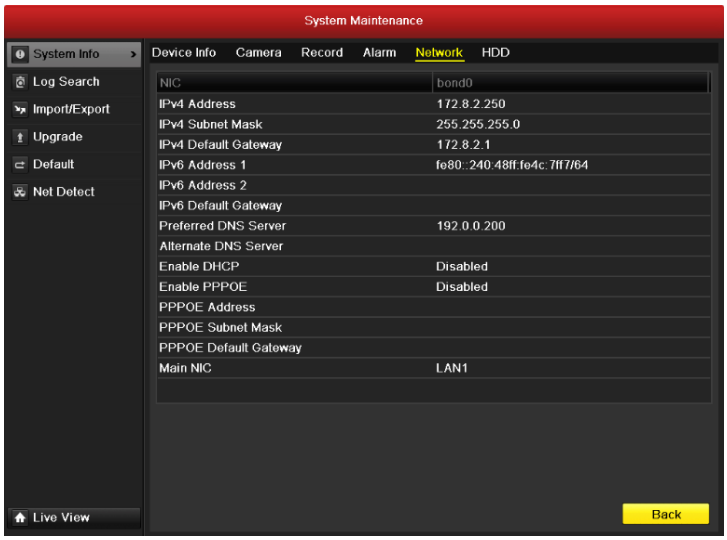

Figure 12.5 Network Information Interface

12.1.6 Viewing HDD Information

Steps:

1. Enter the System Information interface.
   Menu > Maintenance > System Info
2. Click the **HDD** tab to enter the HDD Information menu to view the HDD status, free space, property, etc., as shown in Figure 12.6.

Figure 12.6 HDD Information Interface

12.2 Searching & Export Log Files

Purpose:

The operation, alarm, exception and information of the DVR can be stored in log files, which can be viewed and exported at any time.

Steps:

1. Enter the Log Search interface.

   Menu > Maintenance > Log Search

Figure 12.7 Log Search Interface

2. Set the log search conditions to refine your search, including the Start Time, End Time, Major Type and Minor Type.
3. Click the **Search** button to start search log files.
4. The matched log files will be displayed on the list shown below.

Note: Up to 2000 log files can be displayed each time.

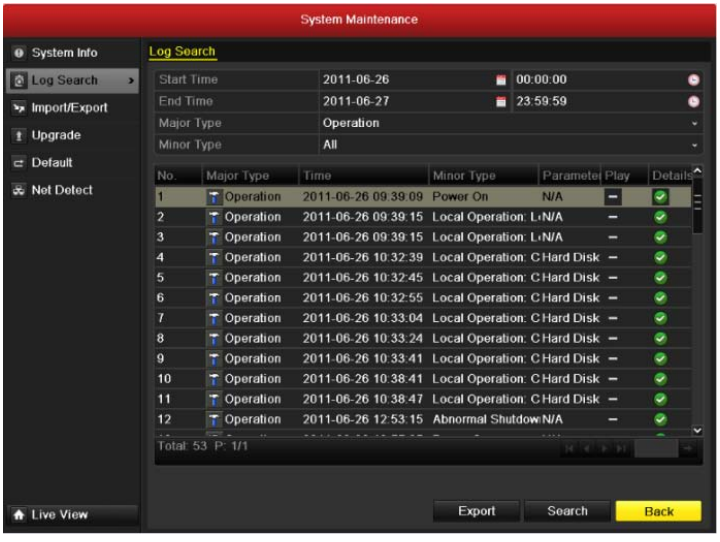
System Maintenance
System Info
Log Search
Import/Export
Upgrade
Default
Net Detect
Live View
Log Search
Start Time 2011-06-26 00:00:00
End Time 2011-06-27 23:59:59
Major Type Operation
Minor Type All
No. Major Type Time Minor Type Paramete Play Details
1 Operation 2011-06-26 09:39:09 Power On N/A
2 Operation 2011-06-26 09:39:15 Local Operation: L N/A
3 Operation 2011-06-26 09:39:15 Local Operation: L N/A
4 Operation 2011-06-26 10:32:39 Local Operation: C Hard Disk
5 Operation 2011-06-26 10:32:45 Local Operation: C Hard Disk
6 Operation 2011-06-26 10:32:55 Local Operation: C Hard Disk
7 Operation 2011-06-26 10:33:04 Local Operation: C Hard Disk
8 Operation 2011-06-26 10:33:24 Local Operation: C Hard Disk
9 Operation 2011-06-26 10:33:41 Local Operation: C Hard Disk
10 Operation 2011-06-26 10:38:41 Local Operation: C Hard Disk
11 Operation 2011-06-26 10:38:47 Local Operation: C Hard Disk
12 Operation 2011-06-26 12:53:15 Abnormal Shutdow N/A
Total: 53 P: 1/1
Export Search Back

Figure 12.8 Log Search Results

5. You can click the button of each log or double click it to view its detailed information, as shown in

Figure 9. And you can also click the button to view the related video files if available.

Figure 12.9 Log Details

6. If you want to export the log files, click the **Export** button to enter the Export menu, as shown in Figure 12.10.

Figure 12.10 Export Log Files

7. Select the backup device from the dropdown list of **Device Name**.
8. Click the **Export** to export the log files to the selected backup device.

You can click the **New Folder** button to create new folder in the backup device, or click the **Format** button to format the backup device before log export.

Note:

1) Please connect the backup device to DVR before operating log export.
2) The log files exported to the backup device are named by exporting time, e.g., *20110514124841logBack.txt*.

12.3 Importing/Exporting Configuration Files

Purpose:

The configuration files of the DVR can be exported to local device for backup; and the configuration files of one DVR can be imported to multiple DVR devices if they are to be configured with the same parameters.

Steps:

1. Enter the Import/Export Configuration File interface.

   Menu > Maintenance > Import/Export

Figure 12.11 Import/Export Config File

2. Click the **Export** button to export configuration files to the selected local backup device.
3. To import a configuration file, select the file from the selected backup device and click the **Import** button. After the import process is completed, you must reboot the DVR.

Note: After having finished the import of configuration files, the device will reboot automatically.

12.4 Upgrading System

Purpose:

The firmware on your DVR can be upgraded by local backup device or remote FTP server.

12.4.1 Upgrading by Local Backup Device

Steps:

1. Connect your DVR with a local backup device where the update firmware file is located.
2. Enter the Upgrade interface.

   Menu > Maintenance > Upgrade
3. Click the **Local Upgrade** tab to enter the local upgrade menu, as shown in Figure 12.12.

Figure 12.12 Local Upgrade Interface

4. Select the update file from the backup device.
5. Click the **Upgrade** button to start upgrading.
6. After the upgrading is complete, reboot the DVR to activate the new firmware.

12.4.2 Upgrading by FTP

Before you start:

Configure PC (running FTP server) and DVR to the same Local Area Network. Run the 3rd-party TFTP software on the PC and copy the firmware into the root directory of TFTP.

Steps:

1. Enter the Upgrade interface.

   Menu > Maintenance > Upgrade
2. Click the **FTP** tab to enter the local upgrade interface, as shown in Figure 12.13.

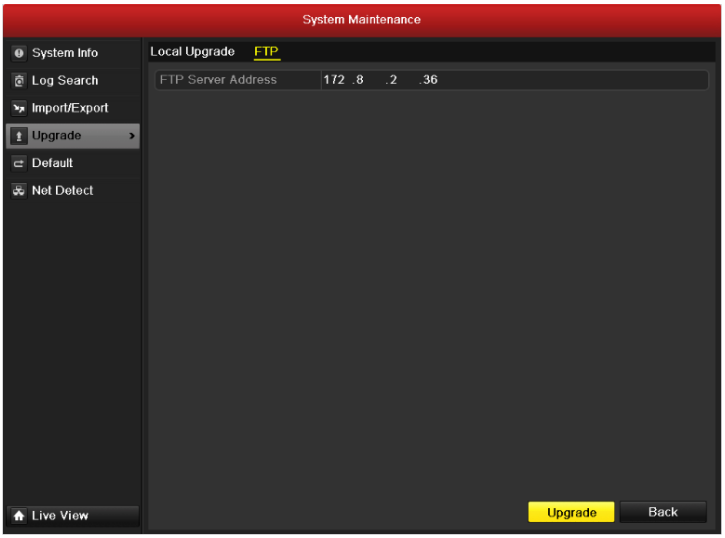

Figure 12.13 FTP Upgrade Interface

3. Enter the FTP Server Address in the text field.
4. Click the **Upgrade** button to start upgrading.
5. After the upgrading is complete, reboot the DVR to activate the new firmware.

12.5 Restoring Default Settings

Steps:

1. Enter the Default interface.

   Menu > Maintenance > Default

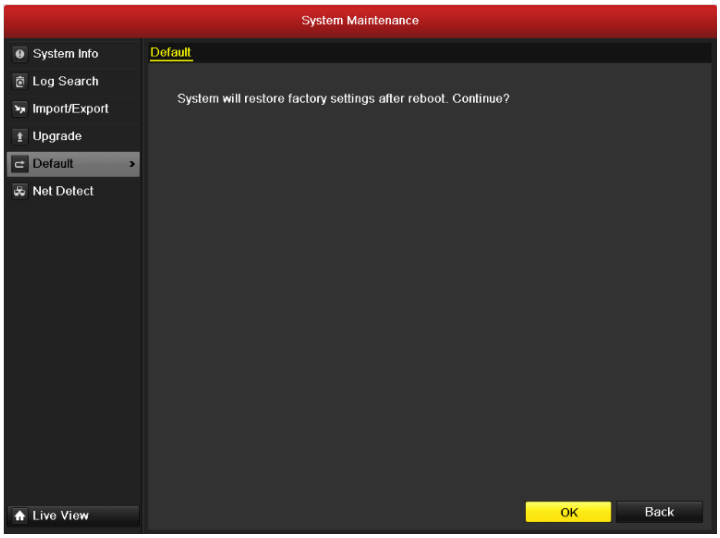

Figure 12.14 Restore Factory Default

2. Click the **OK** button to restore the default settings.

Note: Except the network parameters (including IP address, subnet mask, gateway, MTU, default route and server port), all other parameters of the device will be restored to factory default settings.

C H A P T E R 1 3

Others

13.1 Configuring RS-232 Serial Port

Purpose:

The RS-232 port can be used in two ways:

• Parameters Configuration: Connect a PC to the DVR through the PC serial port. Device parameters can be configured by using software such as HyperTerminal. The serial port parameters must be the same as the DVR's when connecting with the PC serial port.

• Transparent Channel: Connect a serial device directly to the DVR. The serial device will be controlled remotely by the PC through the network and the protocol of the serial device.

Steps:

1. Enter the RS-232 Settings interface.

   Menu > Configuration > RS-232

Figure 13.1 RS-232 Settings Interface

2. Configure RS-232 parameters, including baud rate, data bit, stop bit, parity, flow control and usage.
3. Click the **Apply** button to save the settings.

13.2 Configuring General Settings

Purpose:

You can configure the BNC output standard, VGA output resolution, mouse pointer speed through the Menu > Configuration > General interface.

Steps:

1. Enter the General Settings interface.

   Menu > Configuration > General

2. Select the **General** tab.

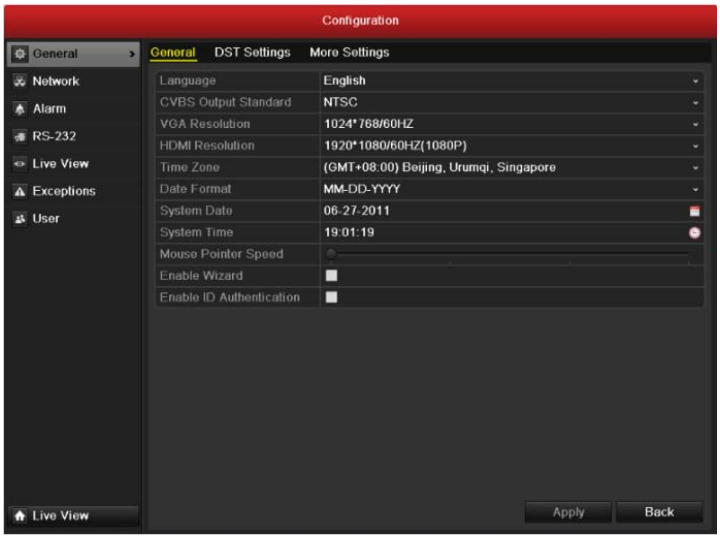

Figure 13.2 General Settings Interface

3. Configure the following settings:
   - **Language:** The default language used is *English*.
   - **CVBS Output Standard:** Select the CVBS output standard to NTSC or PAL, which must be the same with the video input standard.
   - **VGA Resolution:** Select the VGA output resolution, which must be the same with the resolution of the monitor screen.
   - **HDMI Resolution:** Select the HDMI resolution, which must be the same with the resolution of the monitor screen.
   - **Time Zone:** Select the time zone.
   - **Date Format:** Select the date format.
   - **System Date:** Select the system date.
   - **System Time:** Select the system time.
   - **Mouse Pointer Speed:** Set the speed of mouse pointer; 4 levels are configurable.
   - **Enable Wizard:** Enable/disable the Wizard when the device starts up.
   - **Enable Password:** Enable/disable the use of the login password.
4. Click the **Apply** button to save the settings.

13.3 Configuring More Settings

Steps:

1. Enter the General Settings interface.
   Menu > Configuration > General
2. Click the **More Settings** tab to enter the More Settings interface, as shown in Figure 13.3.

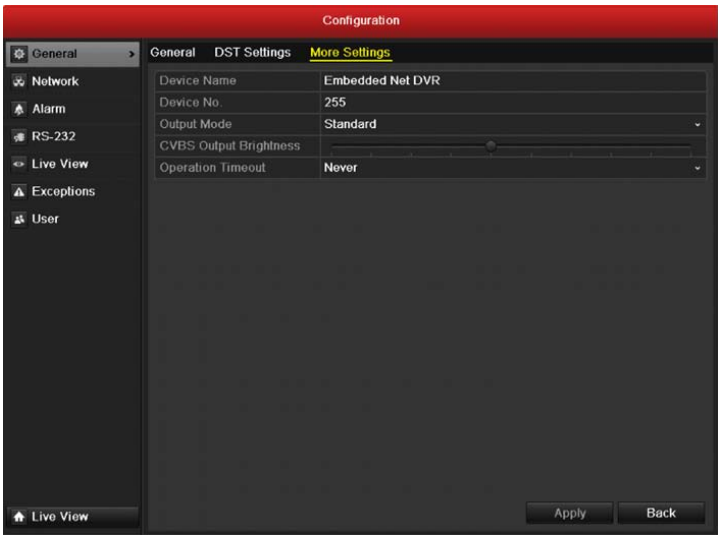

Figure 13.3 More Settings Interface

3. Configure the following settings:
   - **Device Name:** Edit the name of DVR.
   - **Device No.:** Edit the serial number of DVR. The Device No. can be set in the range of 1~255, and the default No. is 255.
   - **Output Mode:** Select the output mode to: Standard, Bright, Gentle or Vivid.
   - **CVBS Output Brightness:** Adjust the video output brightness.
   - **Operation Timeout:** Set timeout time for menu inactivity. E.g., when the timeout time is set to *5 Minutes*, then the system will exit from the current operation menu to live view screen after 5 minutes of menu inactivity.
4. Click the **Apply** button to save the settings.

13.4 Managing User Accounts

Purpose:

There is a default account in the DVR: *Administrator*. The *Administrator* user name is *admin* and the password is *12345*. The *Administrator* has the permission to add and delete user and configure user parameters.

13.4.1 Adding a User

Steps:

1. Enter the User Management interface.

   Menu > Configuration > User

Figure 13.4 User Management Interface

2. Click the **Add** button to enter the Add User interface.

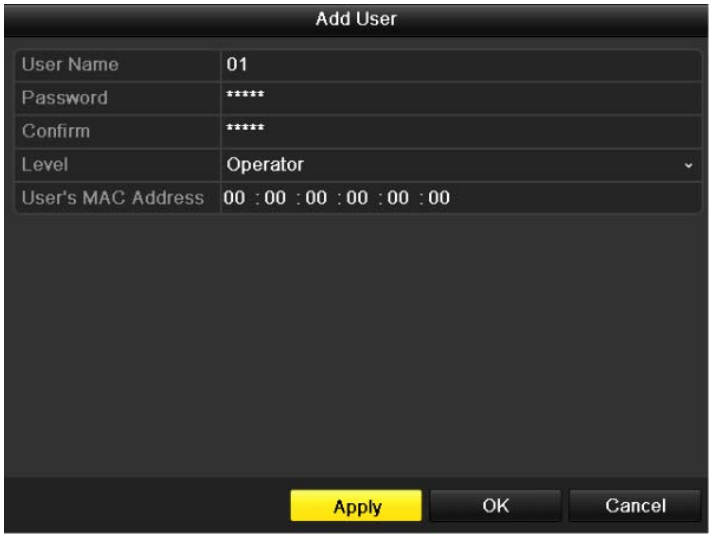

Figure 13.5 Add User Menu

3. Enter the information for new user, including **User Name**, **Password**, **Level** and **User's MAC Address**.

Level: Set the user level to Operator or Guest. Different user levels have different operating permission.

- **Operator:** The *Operator* user level has permission of Two-way Audio in Remote Configuration and all operating permission in Camera Configuration.
- **Guest:** The Guest user has no permission of Two-way Audio in Remote Configuration and only has the local/remote playback in the Camera Configuration.
- **User's MAC Address:** The MAC address of the remote PC which logs onto the DVR. If it is configured and enabled, it only allows the remote user with this MAC address to access the DVR.

4. Click the **OK** button to save the settings and go back to the User Management interface. The added new user will be displayed on the list, as shown in Figure 13.6.

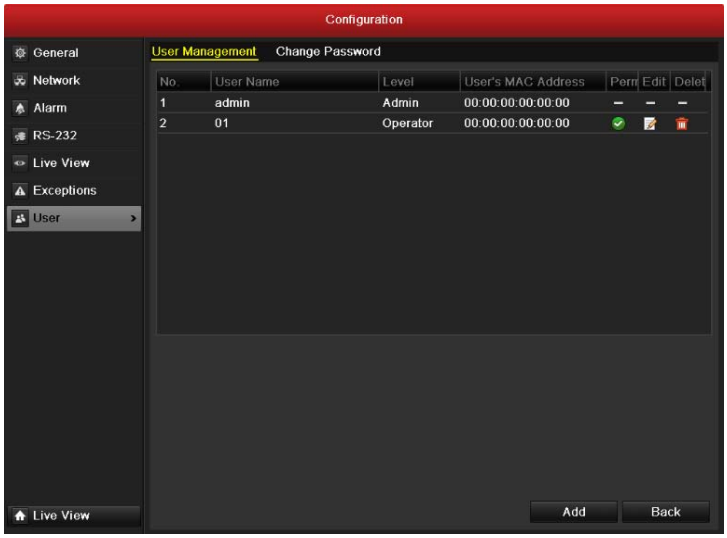

Figure 13.6 Added User Listed in User Management Interface

5. Select the user from the list and then click the button to enter the Permission settings interface, as shown in Figure 13.7.

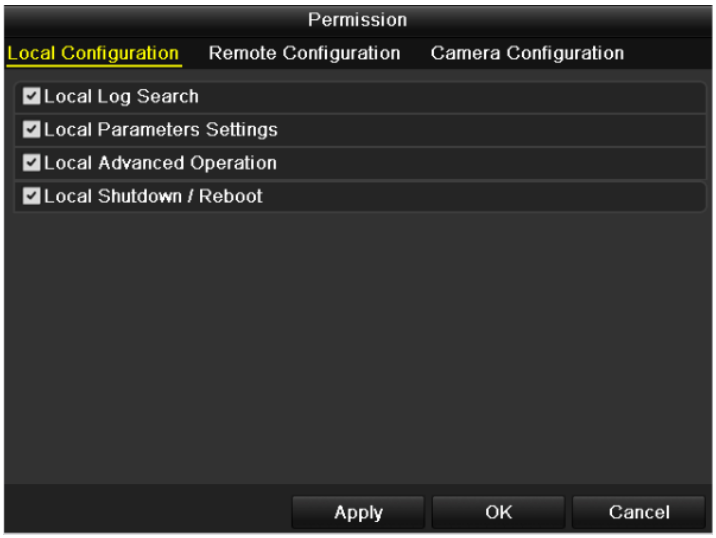

Figure 13.7 User Permission Settings Interface

6. Set the operating permission of Local Configuration, Remote Configuration and Camera Configuration for

the user.

Local Configuration

- Local Log Search: Searching and viewing logs and system information of DVR.
- Local Parameters Settings: Configuring parameters, restoring factory default parameters and importing/exporting configuration files.
- Local Advanced Operation: Operating HDD management (initializing HDD, setting HDD property), upgrading system firmware, clearing I/O alarm output.
- Local Shutdown Reboot: Shutting down or rebooting the DVR.

Remote Configuration

- Remote Log Search: Remotely viewing logs that are saved on the DVR.
- Remote Parameters Settings: Remotely configuring parameters, restoring factory default parameters and importing/exporting configuration files.
- Remote Serial Port Control: Configuring settings for RS-232 and RS-485 ports.
- Remote Video Output Control: Sending remote button control signal.
- Two-Way Audio: Realizing two-way radio between the remote client and the DVR.
- Remote Alarm Control: Remotely arming (notify alarm and exception message to the remote client) and controlling the alarm output.
- Remote Advanced Operation: Remotely operating HDD management (initializing HDD, setting HDD property), upgrading system firmware, clearing I/O alarm output.
- Remote Shutdown/Reboot: Remotely shutting down or rebooting the DVR.

Camera Configuration

- Remote Live View: Remotely viewing live video of the selected camera (s).
- Local Manual Operation: Locally starting/stopping manual recording, picture capturing and alarm output of the selected camera (s).
- Remote Manual Operation: Remotely starting/stopping manual recording, picture capturing and alarm output of the selected camera (s).
- Local Playback: Locally playing back recorded files of the selected camera (s).
- Remote Playback: Remotely playing back recorded files of the selected camera (s).
- Local PTZ Control: Locally controlling PTZ movement of the selected camera (s).
- Remote PTZ Control: Remotely controlling PTZ movement of the selected camera (s).
- Local Video Export: Locally exporting recorded files of the selected camera (s).

7. Click the **OK** button to save the settings and exit interface.

Note: Only the *admin* user account has the permission of restoring factory default parameters.

13.4.2 Deleting a User

Steps:

1. Enter the User Management interface.
   Menu > Configuration > User
2. Select the user to be deleted from the list, as shown in Figure 13.8.

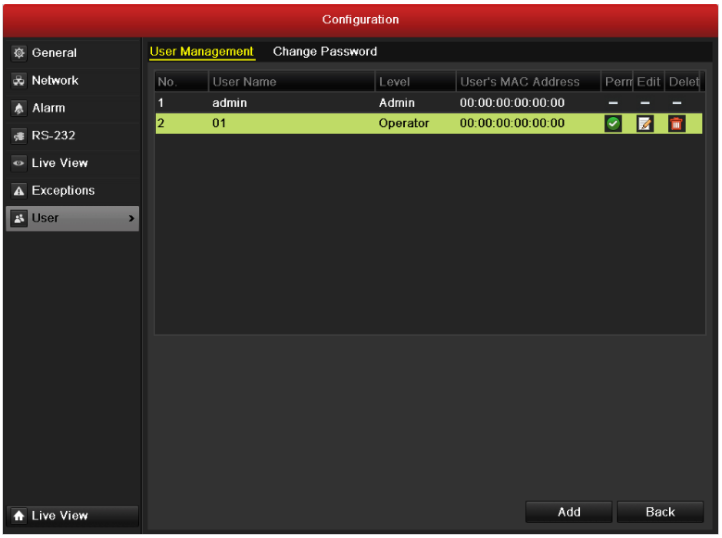

Figure 13.8 Delete a User

3. Click the icon to delete the selected user.

13.4.3 Editing a User

Steps:

1. Enter the User Management interface.

   Menu > Configuration > User

2. Select the user to be edited from the list, as shown in Figure 13.9.

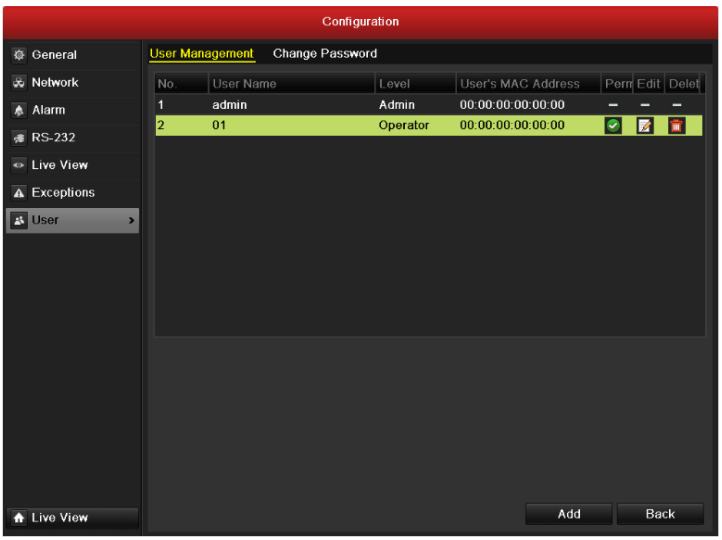

Figure 13.9 Edit a User

3. Click the icon to enter the Edit User interface, as shown in Figure 13.10.

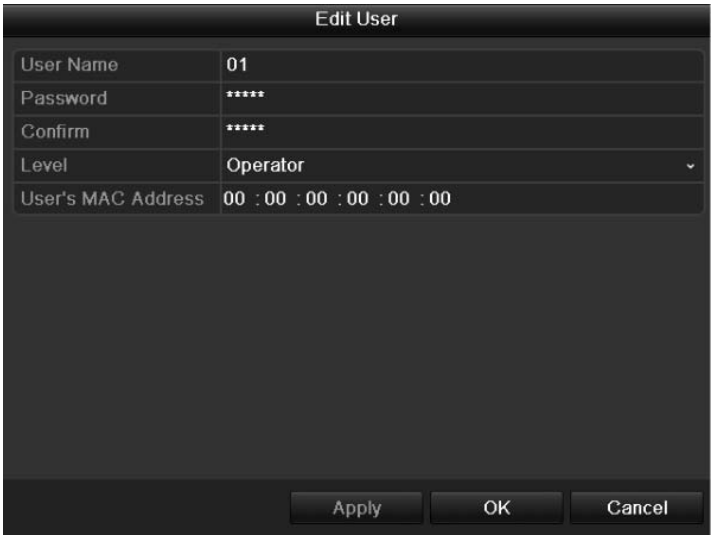

Figure 13.10 Edit User Interface

4. Edit the user information, including user name, password, level and MAC address.
5. Click the **OK** button to save the settings and exit the menu.

13.4.4 Changing Password of Admin

Purpose:

The password of the Admin user account can be changed in the User Management menu.

Steps:

1. Enter the User Management interface.

   Menu > Configuration > User.

2. Click the **Change Password** tab to enter the Change Password menu, as shown in Figure 13.11.

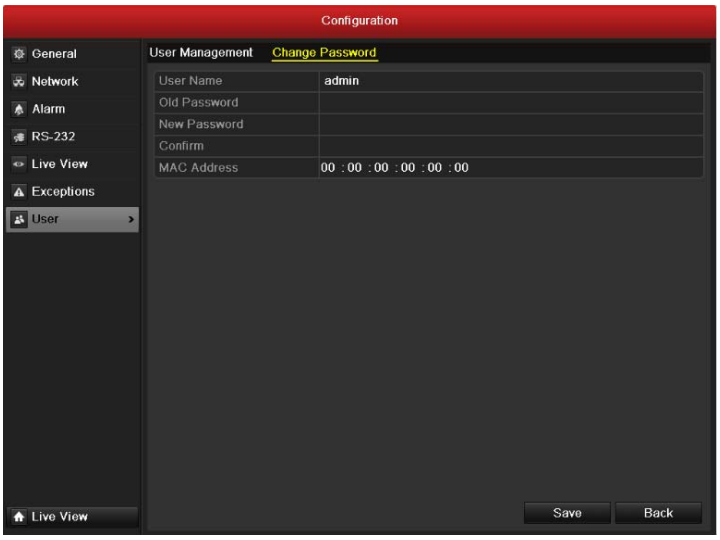

Figure 13.11 Change Password

3. Enter the old password, new password and confirm password on the menu.
4. Click the **Save** button to save the changes.

13.5 Locking/Shutting down/Rebooting Device

Steps:

1. Enter the Shutdown interface.

   Menu > Shutdown

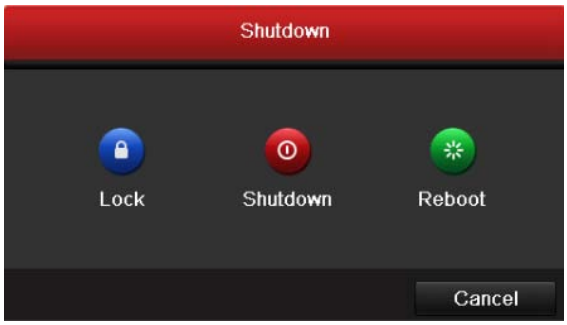

Figure 13.12 Shutdown Menu

2. Click the **Lock** button to lock the device, or

   Click the **Shutdown** button to shut down the device, or

   Click the **Reboot** button to reboot the device.

Note: After locking the device, you need to log in again to operate the device.

C H A P T E R 1 4

Appendix

Glossary

- **Dual Stream:** Dual stream is a technology used to record high resolution video locally while transmitting a lower resolution stream over the network. The two streams are generated by the DVR, with the main stream having a maximum resolution of 4CIF and the sub-stream having a maximum resolution of CIF.
- **DVR:** Acronym for Digital Video Recorder. A DVR is device that is able to accept video signals from analog cameras, compress the signal and store it on its hard drives.
- **HDD:** Acronym for Hard Disk Drive. A storage medium which stores digitally encoded data on platters with magnetic surfaces.
- **DHCP:** Dynamic Host Configuration Protocol (DHCP) is a network application protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network.
- **HTTP:** Acronym for Hypertext Transfer Protocol. A protocol to transfer hypertext request and information between servers and browsers over a network
- **PPPoE:** PPPoE, Point-to-Point Protocol over Ethernet, is a network protocol for encapsulating Point-to-Point Protocol (PPP) frames inside Ethernet frames. It is used mainly with ADSL services where individual users connect to the ADSL transceiver (modem) over Ethernet and in plain Metro Ethernet networks.
- **DDNS:** Dynamic DNS is a method, protocol, or network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a domain name server to change, in real time (ad-hoc) the active DNS configuration of its configured hostnames, addresses or other information stored in DNS.
- **Hybrid DVR:** A hybrid DVR is a combination of a DVR and NVR.
- **NTP:** Acronym for Network Time Protocol. A protocol designed to synchronize the clocks of computers over a network.
- **NTSC:** Acronym for National Television System Committee. NTSC is an analog television standard used in such countries as the United States and Japan. Each frame of an NTSC signal contains 525 scan lines at 60Hz.
- **NVR:** Acronym for Network Video Recorder. An NVR can be a PC-based or embedded system used for centralized management and storage for IP cameras, IP Domes and other DVRs.
- **PAL:** Acronym for Phase Alternating Line. PAL is also another video standard used in broadcast televisions systems in large parts of the world. PAL signal contains 625 scan lines at 50Hz.
- **PTZ:** Acronym for Pan, Tilt, Zoom. PTZ cameras are motor driven systems that allow the camera to pan left and right, tilt up and down and zoom in and out.
- **USB:** Acronym for Universal Serial Bus. USB is a plug-and-play serial bus standard to interface devices to a host computer.

FAQ

- **Why does my DVR make a beeping sound after booting?**

The possible reasons for the warning beep on the DVR are as follows:

a) There is no HDD installed in the DVR.

b) The HDD is not initialized.

c) HDD error

To cancel the beeping sound and use the DVR without HDD, enter the Exception Settings interface. For detailed information, see Chapter Handling Exception..

- **Why does the DVR seem unresponsive when operating with the IR remote control?**

Please read through the section ***Using the IR Remote Control***, and check:

a) The batteries are installed correctly in the remote, making sure that the polarities of the batteries are not reversed.

b) The batteries are fresh and are not out of power.

c) The remote has not been tampered with.

d) there are no fluorescent lamps in use nearby.

- **Why does the PTZ seem unresponsive?**

If the PTZ seem unresponsive, please check:

a) The RS-485 cable is properly connected.

b) The dome decoder type is correct.

c) The dome decoder speed configuration is correct.

d) The dome decoder address bit configuration is correct.

e) That the main board RS-485 interface is not broken.

- **Why is there no video recorded after setting the motion detection?**

If there are no recorded video after setting the motion detection, please check:

a) The recording schedule is setup correctly by following the steps listed in ***Configuring Record/Capture Schedule***.

b) The motion detection area is configured correctly (See ***Configuring Motion Detection***).

c) The channels are being triggered for motion detection (See ***Configuring Motion Detection***).

- **Why doesn't the DVR detect my USB export device for exporting recorded files?**

There's a chance that the DVR and your USB device is not compatible. Please refer to our company's website to view a list of compatible devices.

- **My DVR is in Live View mode and the menu does not show up. It does not respond to the mouse, the front panel, the remote or keyboard.**

Your DVR may be in auxiliary mode. This occurs when the F1 button is pressed on the front panel. To return to the previous mode of operation, press the F1 button again.